GENERAL ZOOLOGY

or

SYSTEMATIC NATURAL HISTORY

by

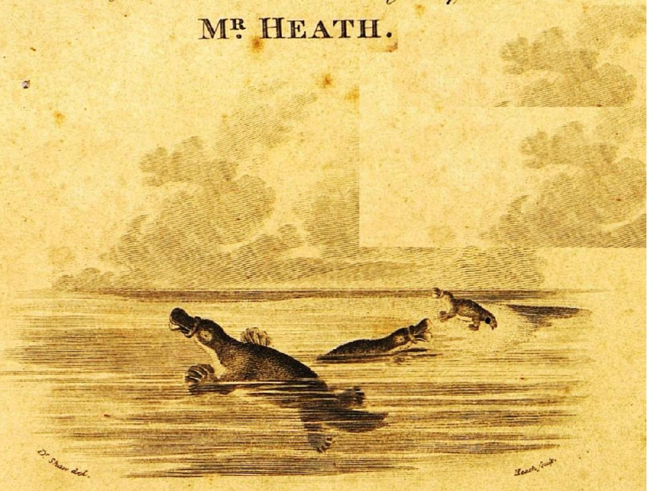
GEORGE SHAW, M.D. F.R.S.&c.

WITH PLATES

from the first Authorities and most select specimens

Engraved principally by

M^r. HEATH.



VOL. I. Part 1.

MAMMALIA.

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1800.

GENERAL ZOOLOGY.

VOLUME I.——PART I.

MAMMALIA.

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1800.

ADVERTISEMENT.

IN the course of this work will be comprised the whole of what is termed Zoology, *or the History of the Animal World. It will commence with Quadrupeds, and will proceed, in systematic order, through all the remaining branches, viz. Birds, Amphibia, Fishes, Insects, Vermes, Testaceous Animals, Zoophytes, &c. The number of volumes will probably amount to ten or twelve.*

The Linnæan arrangement, with some occasional variations, will in general be pursued, as on the whole the most eligible; though his arrangement of Quadrupeds may to many appear, at first sight, not quite so easy and natural as that of Mr. Pennant.

MAMMALIA

OR,

VIVIPAROUS QUADRUPEDS.

MAMMALIA*, or Viviparous Quadrupeds, are distributed by Linnæus into seven orders, viz. *Primates, Bruta, Feræ, Glires, Pecora, Belluæ, Cete.*

The *Primates* are remarkable for a nearer approach to the human form than is exhibited in the other quadrupeds. The Bats, however, which are by Linnæus ranked in this order, differ greatly from the rest. The principal character of the *Primates* consists in the teeth, which, except in the Bats, strongly resemble the human.

The *Bruta* have no front or cutting-teeth, either in the upper or under jaw: their feet are armed with strong claws; their pace is, in gene-

* So named from being provided with *mammæ*, or *teats*, for the purpose of suckling their young; which circumstance sufficiently distinguishes them from all other animals. Some naturalists have called them *viviparous quadrupeds*; as producing perfectly-formed living young; in opposition to what were formerly termed *oviparous* or egg-producing quadrupeds, as Tortoises, Lizards, &c. &c.

ral, somewhat slow, and their food is principally vegetable.

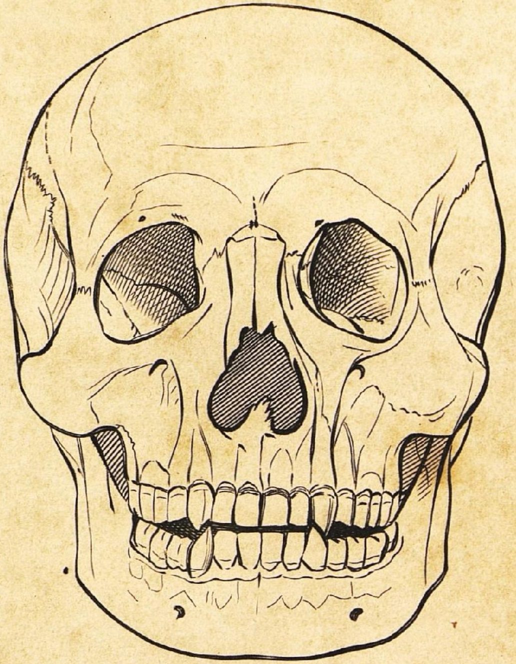
The *Feræ* have generally six cutting-teeth of a somewhat conical shape, both in the upper and under jaw: these are succeeded by strong and sharp fangs, or canine-teeth; and the grinders are formed into conical or pointed processes. This tribe is predacious, living principally on the flesh of other animals: the feet are armed with sharp claws.

The *Glires* are furnished with two remarkably large and long fore-teeth both above and below; but have no canine, or sharp lateral teeth: their feet are provided with claws, and their general pace is more or less salient or leaping: their food is vegetable; consisting of roots, barks, fruits, &c.

The *Pecora*, among which are comprised what are commonly termed cattle, have no front teeth in the upper jaw, but several, viz. six or eight, in the lower: their feet are furnished with cloven or divided hoofs: their food is entirely vegetable, and they possess the remarkable power of rumination, or throwing up again into the mouth the food they have first swallowed, in order that it may be still farther reduced or comminuted by the teeth. This remarkable process is assisted by the peculiar structure of the stomach, which, in these animals, is divided into four cavities, each having its peculiar office.

The *Belluæ* have obtuse front-teeth; the feet are furnished with hoofs, in some whole or round-

To face p. VII. of the Introduction.



London, 1800 Feb.y 1. Published by G. Kearsley, Fleet Street.

ed, in others obscurely lobed or subdivided: their food is vegetable.

The *Cete* consist of the Whales, which, though resembling fishes as to general form or outline, are real Mammalia in disguise; having similar bones, lungs, teats, &c. &c. Their teeth are frequently less osseous than in other Mammalia. They feed on soft marine animals and vegetables, and swim chiefly by means of their pectoral or breast fins, in which are inclosed the bones of the fore-feet. Their tail is horizontal, and they are furnished with breathing-holes on the top of the head, through which they occasionally spout the water.

The teeth forming a principal mark of distinction in the Linnæan arrangement of Quadrupeds, it is necessary to have a clear idea of the position of these organs. This will readily be obtained from an inspection of the annexed plate, in which, as the principal example, are represented the human teeth.

The *front-teeth* are termed *cutting-teeth, dentes primores,* or *incisores.* The single, and more sharply formed teeth on each side of these are called *canine-teeth, dentes canini,* or *laniarii.* The remaining teeth are termed *grinders,* or *grinding-teeth, dentes molares.*

The general history of Quadrupeds has been so often detailed in the various works on Natural History, that a fresh publication on the subject must of necessity labour under peculiar disadvantages. The valuable works of the Count de Buf-

fon and Mr. Pennant have diffused such a degree of information on these subjects, that it does not seem an easy task to improve upon their plan otherwise than by the introduction of the Linnæan method of arrangement, the rectification of errors relative to synonyms, the addition of proper specific characters, and the introduction of new species; more particularly those which have been lately introduced to the knowledge of European naturalists from the vast island of Australasia or New Holland, and which seem to exceed in singularity of form and character those of every other region of the globe.

Of the *generic* and *specific* characters, but more particularly the latter, it should be observed, that implicit faith is not always to be placed in them. They are highly useful in a general view, but should merely be regarded in that light, and cannot be considered as in every instance strictly and absolutely exact. It is farther to be observed, that the English specific characters in the present work are commonly so rendered as to be somewhat fuller or more particular than the Latin; from which it will also be perceived, that they occasionally vary a little. This was necessary, in order to accommodate them to the purpose of general readers.

With respect to figures, those highly important accompaniments to a work of this kind, no care has been spared to give such as convey the clearest and most accurate ideas of the animals themselves. Where Buffon's figures were judged

unexceptionable, they have been admitted: others are introduced from publications of the first respectability, from original drawings, or from those rich repositories of science, the British and Leverian Museums.

The talents of the engraver to whose care they have been committed are too well known to require particular commendation.

The remaining volumes will be published in regular order, and with as much dispatch as is consistent with the accuracy required in a systematic work on Natural History.

ERRATA.—PART I.

Page 14, l. 3, in the synonyms, for Gen *read* Gesn.
36, l. 5, after brown place a comma.
70, l. 5, for Lemurmurinus *read* Lemur murinus.
72, l. 20, instead of a comma after *only one* place a period.
74, l. 10, for limbs of the tail *read* limbs, with the tail.
78, in the specific character of Antigua Monkey, l. 2, for barbatii *read* barbatis, and for prehensils *read* prehensili.
67, l. 8. for other *read* of the.
137, in the English specific character for abtuse *read* obtuse.
142, l. 7, for perspillatus *read* perspicillatus
177, l. 27, for Myrecophaga *read* Myrmecophaga.
167, in the Latin specific character, for tedradactylis *read* tetradactylis.
227, l. 14, for 1563 *read* 1653.
235, l. 11, for the *read* their.
235, l. 14, for it latitude *read* in latitude.

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Smith sculp.

ORAN OTAN. Allam. Buff. &c.

QUADRUPEDS.

ORDER

PRIMATES.

SIMIA. APE.

Linnæan Generic Character.

Dentes primores utrinque 4, approximati.	*Front-teeth* in each jaw 4, placed near together.
Laniarii solitarii, longiores, hinc remoti.	*Canine-teeth* solitary, longer than the others, distant from the remaining teeth, or grinders.
Molares obtusi.	*Grinders* obtuse.

THIS numerous race may be properly divided into four sections, viz. 1. *Apes*, or such as are destitute of a tail. 2. *Baboons*, or such as have very muscular bodies, and whose tails are commonly short. 3. *Monkies*, whose tails are, in general, long; and, lastly, *Sapajous*, or monkies, with what are termed *prchensile tails*, viz. such as can, at pleasure, be twisted round any object, so as to answer the purpose of an additional hand to the animal.

Of the whole genus, or the monkey tribe in general, it may be observed, that the Baboons are commonly of a ferocious and sullen disposition. The larger Apes are also of a malignant temper, except the Oran Otan and the Gibbons. The Monkies, properly so called, are very various in their dispositions; some of the smaller species are lively, harmless, and entertaining; while others are as remarkable for the mischievous malignity of their temper, and the capricious uncertainty of their manners.

It may not be improper here to observe, that it is no easy task to determine with exact precision the several species of this extensive genus; since, exclusive of the varieties in point of colour, they are often so nearly allied as to make it difficult to give real distinctive characters. To this must be added, the mutilations which occasionally occur in the specimens preserved in museums, or exhibited in public, and which, of course, are liable to deceive an inexperienced eye, and even to embarrass the most expert and sagacious naturalist. To circumstances like these are owing the figure of the *Mantegar*, or tufted Ape, in the first and second editions of Mr. Pennant's History of Quadrupeds. The figures in authors are not always to be trusted: those in the Natural History of the Count de Buffon are, in general, good. Those of Schreber are copied from them, and coloured, seemingly, from description.

ORAN OTAN.

Simia Satyrus.
Homo Troglodytes. } *S. ecaudata, ferruginea, lacertorum pilisre versis, natibus tectis.* *Lin. Syst. Nat. p.* 33. *Gmel. p.* 26.

Tailless Ape, either chesnut-coloured or black, without callosities behind, and with the hair on the lower part of the arms reversed.

Satyrus Indicus. *Tulp. Obs. Med. p.* 284. *t.* 14.

Homo Sylvestris. *Orang-Otang. Bont. Jav.* 84. *t.* 84.

Orang-Outang, sive Homo Sylvestris. *Tyson. anat. pygm. f.* 1. 2.

Jocko. *Buff.* 14. *p.* 43. *t. and suppl.* 7. *t.* 1. *ex ed Allamand.*

Man of the Woods. *Edwards pl.* 213.

Orang-Otang. *Vosmaer. descr. &c. t.* 1. 2.

Orang-Otang. *Camper kort beright, &c. Amst.* 1778.

Great Ape. *Pennant Quadr. ed.* 3. *p.* 80. *pl.* 36.

Of these singular animals, the species which has most excited the attention of mankind is, the Oran Otan, or, as it is sometimes called, the Satyr, great Ape, or Man of the woods. It is a native of the warmer parts of Africa and India, as well as of some of the Indian islands, where it resides principally in woods, and is supposed to feed, like most others of this genus, on fruits. The Oran Otan appears to admit of considerable variety in point of colour, size, and proportions; and there is reason to believe, that, in reality, there may be two or three kinds, which, though nearly approximated as to general similitude, are yet specifically distinct. The specimens imported into Europe have rarely exceeded the height of two or three feet, and were supposed to be young animals; but it is said that the full-grown ones are, at least, six feet in height. The general colour

seems to be dusky or brown; in some ferruginous or reddish brown, and in others coal-black, with the skin itself white. The face is bare; the ears, hands, and feet nearly similar to the human, and the whole appearance such as to exhibit the most striking approximation to the human figure. The likeness, however, is only a general one, and the structure of the hands and feet, when examined with anatomical exactness, seems to prove, in the opinion of those most capable of judging with accuracy on the subject, that the animal was principally designed by nature for the quadrupedal manner of walking, and not for an upright posture, which is only occasionally assumed, and which, in those exhibited to the public, is, perhaps, rather owing to instruction than truly natural. The Count de Buffon, indeed, makes it one of the distinctive characters of the real or proper apes (among which the oran otan is the chief), to walk erect on two legs only; and it must be granted, that these animals support an upright position much more easily and readily than most other quadrupeds, and may probably be very often seen in this attitude even in a state of nature.

The manners of the Oran Otan, when in captivity, are gentle, and perfectly void of that disgusting ferocity so conspicuous in some of the larger baboons and monkies. The Oran Otan is mild and docile, and may be taught to perform, with dexterity, a variety of actions in domestic life. Thus it has been seen to sit at table, and, in its manner of feeding and general behaviour, to

Smith sculp.

BLACK ORAN-OTAN. *from Tyson.*

London. Publish'd by G. Kearsley, Fleet Street

imitate the company in which it was placed: to pour out tea, and drink it without aukwardness or constraint; to prepare its bed with great exactness, and compose itself to sleep in a proper manner. Such are the actions recorded of one which was exhibited in London in the year 1738; and the Count de Buffon relates nearly similar particulars of that which he saw at Paris. Dr. Tyson, who, about the close of the last century, gave a very exact description of a young Oran Otan, then exhibited in the metropolis, assures us, that, in many of its actions, it seemed to display a very high degree of sagacity, and was of a disposition uncommonly gentle; *The most gentle and loving creature that could be. Thoſe that he knew a shipboard he would come and embrace with the greatest tenderness, opening their bosoms, and clasping his hands about them; and, as I was informed, though there were Monkies aboard, yet it was observed he would never associate with them, and, as if nothing akin to them, would always avoid their company.*

But however docile and gentle when taken young, and instructed in its behaviour, it is said to be possessed of great ferocity in its native state, and is considered as a dangerous animal, capable of readily overpowering the strongest man. Its swiftness is equal to its strength, and for this reason it is but rarely to be obtained in its full-grown state; the young alone being taken. A few years past, the hand of a supposed full-grown oran otan was brought from Sierra Leona, which, from its size, seemed to justify the idea of the stature to

which this species is supposed to grow: it was of a black colour, and, consequently, belonged to the black variety of this species; or that described in a young state by Dr. Tyson.

It is remarkable that the large hand represented in professor Allamand's edition of the Natural History of the Count de Buffon, as that of an Oran Otan, proved, according to Camper, who examined it accurately, to have been an artificial preparation, made by distorting and otherwise altering the fore-foot of some large quadruped; most probably that of a bear, in the opinion of Camper; and the nails were glued into the places where the claws had been. Such are the deceptions to which even the most experienced naturalists are sometimes liable! This hand became the subject of private controversial correspondence between professors Allamand and Camper. At length its proprietor, Mr. Vink of Rotterdam, permitted it to be opened, when the opinion of Camper was found to be just; the whole preparation being composed of bones, hair, skins, &c. nicely agglutinated and compacted, with the addition of nails at the extremities.

The hand, however, which was brought from Sierra Leona, was undoubtedly genuine, and the whole skin of the animal is, at present, in the possession of Mr. A. Afzelius, demonstrator of botany in the university of Upsal; but its full description and figure having never been published, it is impossible to pronounce, with certainty, the species to which it belongs.

ORAN OTAN. *Vosmaer.*

1800. Jan.y 1 Publish'd by G. Kearsley. Fleet Street.

Mr. Vosmaer's account of the manners of an Oran Otan brought into Holland in the year 1776, and presented to the Prince of Orange's menagerie, is so curious and satisfactory, that I shall extract it from his accurate publication on that subject; and shall also accompany it by two excellent figures of the animal, with which he has illustrated his work; and these, together with an accurate copy of the young Pongo, described and figured by Dr. Tyson under the name of the pygmy; and of that preserved in the British Museum, figured by Edwards; and, lastly, the elegant and expressive representation of M. Allamand, in his edition of Buffon, will, it is presumed, give the clearest and most satisfactory ideas of these extraordinary animals, which the present state of our knowledge on the subject will permit us to obtain.

This animal, says M. Vosmaer, was a female: its height was about two Rhenish feet and a half. It shewed no symptoms of fierceness or malignity, and was even of a somewhat melancholy appearance. It was fond of being in company, and shewed a preference to those who took daily care of it, of which it seemed to be sensible. Often when they retired it would throw itself on the ground, as if in despair, uttering lamentable cries, and tearing in pieces the linen within its reach. Its keeper having sometimes been accustomed to sit near it on the ground, it took the hay of its bed, and laid it by its side, and seemed, by every demonstration, to invite him to be seated near.

Its usual manner of walking was on all-fours, like other apes; but it could also walk on its two hind feet only. One morning it got unchained, and we beheld it with wonderful agility ascend the beams and rafters of the building: it was not without some pains that it was retaken, and we then remarked an extraordinary muscular power in the animal; the assistance of four men being necessary, in order to hold it in such a manner as to be properly secured. During its state of liberty it had, amongst other things, taken the cork from a bottle containing some Malaga wine, which it drank to the last drop, and had set the bottle in its place again. It eat almost every thing which was given it; but its chief food was bread, roots, and especially carrots; all sorts of fruits, especially strawberries: and appeared extremely fond of aromatic plants, as parsley and its root. It also eat meat, both boiled and roasted, as well as fish. It was not observed to hunt for insects like other monkies; it was fond of eggs, which it broke with its teeth and sucked completely; but fish and roast meat seemed its favourite food. It had been taught to eat with a spoon and a fork. When presented with strawberries on a plate, it was extremely pleasant to see the animal take them up, one by one, with a fork, and put them into its mouth, holding, at the same time, the plate in the other hand. Its common drink was water; but it also very willingly drank all sorts of wine, and particularly Malaga. After drinking it wiped its lips, and after eating, if presented with a tooth-pick,

would use it in a proper manner. I was assured, that on shipboard it ran freely about the vessel, played with the sailors, and would go, like them, into the kitchen for its mess. At the approach of night it lay down to sleep, and prepared its bed by shaking well the hay, on which it slept, and putting it in proper order, and, lastly, covering itself warm with the coverlet. One day, seeing the padlock of its chain opened with a key, and shut again, it seized a little bit of stick, and put it into the key-hole, turning it about in all directions, endeavouring to see whether the padlock would open or not. This animal lived seven months in Holland. On its first arrival it had but very little hair, except on its back and arms: but on the approach of winter it became extremely well covered; the hair on the back being three inches in length. The whole animal then appeared of a chesnut colour; the skin of the face, &c. was of a mouse colour, but about the eyes and round the mouth of a dull flesh colour.

It came from the island of Borneo, and was deposited in the museum of the Prince of Orange.

Upon the whole, it appears clearly that there are two distinct species of this animal, viz. the *Pongo*, or *great black Oran Otan*, which is a native of Africa, and the *reddiſh brown or chesnut Oran Otan*, called the *Jocko*, which is a native of Borneo and some other Indian islands. This latter, as appears from a collation of most of the specimens which have been surveyed with the necessary degree of exactness, is distinguished by

having no nails on the great toes. Whereas, in the *Pongo,* or black species, they are conspicuous. In one specimen, however, of the *Jocko,* M. Camper observed a very small nail on the great toe of one foot only; the other being without; but as the toe which had the nail differed from that of the opposite foot, in having an additional joint, M. Camper considered it as a lusus naturæ. The figures given by Dr. Tyson and the Count de Buffon represent the black oran otan, or *Pongo,* though the Count de Buffon's figure is, by a mistake, entitled *Jocko.* It was drawn from the young animal in a living state; but it is acknowledged in the supplemental volume, published by Mr. Cepede, that the artist has overcharged it in some particulars. Mr. Edwards's figure represents the *Jocko* or chesnut-coloured species, and is, in one point, erroneous, viz. in representing the great toes furnished with nails; which, as before observed, are wanting in this animal.* I must also add, that, in most of the copies of Mr. Edwards's work, the Oran Otan is coloured somewhat too light: the face, neck, and hands, in particular, which should have a slight wash of Indian ink, in order to produce the proper shade of brown; and a more dusky cast should also pervade the whole figure, as appears clearly from the original drawing now preserved in the British Museum.

* This particular in our representation, from Edwards's original drawing in the British Museum, is properly corrected.

CHESNUT ORAN OTAN. *from Edwards.*

In Dr. Gmelin's edition of the Systema Naturæ, the smaller variety, or the Jocko in its less shaggy or more naked state, is given as a distinct species, under the name of *Simia Troglodytes.* The print published many years past, by the name of *Chimpanzee,* is of this kind; as is, perhaps, the figure in Tulpius.

The animal described in the Philosophical Transactions, vol. 59. p. 72. pl. 3. is by Gmelin, in his edition of the Systema Naturæ, referred to the Oran Otan; but Mr. Pennant, in the last edition of his History of Quadrupeds, seems to consider it as perfectly distinct, and describes it under the title of Golock. It has a pointed face; long and slender limbs; arms, when the animal is upright, not reaching lower than the knees; head round and full of hair; grows to the height of a man. Inhabits the forests of Mevat in the interior parts of Bengal. In its manners is gentle and modest; called by the natives golock, or the wild man; distinguished from the Oran Otan by its slender form; and from the Gibbon by its having much shorter arms: colour entirely black. The short description given in the Philosophical Transactions is somewhat singular: The animal is said to be of the height of a man; the teeth white as pearls; the arms in due proportion, and the body very *genteel.*

LONG-ARMED APE.

Simia Lar. *S. ecaudata, natibus calvis, brachiis longitudine corporis. Lin. Syst. Nat. Gmel. p. 2.*

Tailless black Ape (sometimes white), without callosities behind, and with arms as long as the body.

Homo Lar. *Lin. Mantiss. pl. 2. p. 521.*

Simia Longimana. *Schreber Saeugth. t. 3. f. 1.*

Miller Cimelia Physica. t. 27.

Grand Gibbon. *Buff. Hist. Nat. 14. t. 2.*

Long-armed Ape. *Pennant Quadr. p. 184.*

VAR.

Petit Gibbon. *Buff. Hist. Nat. 14. t. 3.*

Simia Longimana. *Museum Leverianum. 2. t. 1.*

THIS is a species of a more deformed appearance than the Oran Otan, and is distinguished by the excessive length of its arms, which, when the animal stands upright, are capable of touching the ground with the fingers. It is a native of India and some of the Indian islands, and grows to the height of four feet or more. Its colour is black; but the face is commonly surrounded by a whitish beard. This animal is well figured in Buffon; and a smaller variety is finely represented in Mr. Millar's miscellaneous plates of Natural History.

VARIETY.—*White gibbon.* This is generally considered as a variety of the former; from which it differs in being entirely white, except the face and hands, which are black. In the Leverian Museum is a most elegant specimen, which is figured in No. 2 of the *Museum Leverianum.* Our present figure is also from the same specimen. What seems to prove this to be a variety of the black

LONG-ARMED APE.

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Heath sculp.

LONG-ARMED APE.

White Variety.

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Heath sculp.t

BARBARY APE.

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gibbon, above-described, is, that a patched or parti-coloured small variety of that animal is sometimes seen, and is figured in the Count de Buffon's work, having the lower part of the back and the feet white, while the rest of the animal is of a deep brown. The larger kind is also represented by Buffon with whitish hands and feet.

Notwithstanding the apparent ferocity of the Gibbon, and the deformity of its figure, it is of a more tractable and gentle nature than most of its tribe, and has even been celebrated for the decorum and modesty of its behaviour. Considered with respect to the rest of the genus it ranks among the genuine Apes, or those which have not the least vestige of a tail, and, like the *Oran Otan*, alarms the pride of mankind by too near an approach to the real *Primates* of the creation. Nay, Linnæus, in his description referred to in the synonyms, actually places it in the genus *Homo*, under the title of Homo Lar.

BARBARY APE.

Simia Inuus. *S. ecaudata, natibus calvis, capite oblongo. Lin.*
Tailless pale-brown Ape, with callosities behind, and with an oblong head.
Simia Inuus. *Speculum Linnæanum*, 1. *t.* 1.
Magot. *Buff.* 14. *t.* 8. 9.
Barbary Ape. *Pennant Quadr. p.* 186.

THIS, which is the species of ape most commonly seen in exhibitions of animals, grows to the height of about four feet. It is not remarkable

for docility or good temper; but, by force of discipline, is made to exhibit a greater degree of intelligence than many others. Its colour is an olivaceous brown, paler or whiter beneath: the face is of a swarthy flesh colour. The hands and feet have nails resembling the human, as in the two former species. It is also destitute of any real tail, but there is commonly a short skinny appendix in the place of one. This animal is found in Barbary, as well as in many of the lower parts of Africa.

PYGMY.

Simia Sylvanus. *S. ecaudata, natibus calvis, capite subrotundo, brachiis brevioribus. Lin.*

Tailless pale-brown Ape, with callosities behind, and with a roundish head.

Simia. *Gen. Quadr.* 847. *Raii syn. Quadr.* 149.

Cercopithecus. *Jonst. Quadr. t.* 59. *f.* 5.

Pitheque. *Buff. Nat. Hist.* 14. *p.* 84. *and supp.* 7. *t.* 2. 3. 4. 5.

Pygmy Ape. *Pennant Quadr. p.* 183.

VAR.?

Alpin. *Hist. Nat. Ægypt. t.* 20. *f.* 1.

This is the smallest of the genuine Apes or those destitute of tails. In its general appearance, as well as in colour, it extremely resembles the Barbary Ape; but is not larger than a cat, and has a rounder or flatter face than the Barbary Ape. This is supposed, by Mr. Pennant, to have been the Pygmy of the ancients, which was said to wage war, at certain seasons, with the cranes. It

is a native of Æthiopia, where it is most common; but it is also found in other parts of Africa. It is easily tamed, and is much more docile and gentle than the former species.

In the supplemental part of the Count de Buffon's Natural History, we also meet with a seeming variety of the Pygmy, which is said to differ in having no callosities or bare spaces behind. Mons. Buffon thinks it a distinct species, and observes, that it has been described by no one except Prosper Alpinus, who has given a figure of it. The figure given in Buffon's work is from a drawing sent to him by Mr. Peter Collinson. The hair is said to be red. The face seems, in the engraving, to be represented of a dark colour; and the general appearance is so perfectly that of the Pygmy, that the particular difference is scarce perceptible. The figure referred to in Prosper Alpinus is at pl. 20. fig. 1. of his Hist. Nat. Ægypt. That given by Buffon is copied in the present work.

We now proceed to the second division of this genus, or that containing the *Baboons*.

Much confusion seems to have prevailed among naturalists with respect to the different species of Baboons, and the synonymous names of authors have been erroneously given, not only in the twelfth edition of the Systema Naturæ of Linnæus, but in the History of Quadrupeds by Mr. Pennant and others. We shall begin with the species most commonly seen in exhibitions of animals.

COMMON BABOON.

Simia Sphinx. *S. semicaudata, ore vibrissato, unguibus acuminatis, natibus calvis. Lin.*

Short-tailed brown Baboon, with callosities behind, and with dull flesh-coloured face and pointed nails.

Papio. Baboon. *Gesn. Quadr.* 252. *Aldrov. dig.* 260. *Jonst. Quadr.* 145. *t.* 61. *f.* 1. *Raii Quadr.* 158. *Briss. Quadr.* 192.

Papion. *Buff.* 14. *t.* 13. 14.

Mottled Baboon. *Pennant Quadr.* 197.

This is a species of very considerable size, and when in a sitting posture, is from three to four feet in height. It is extremely strong and muscular in its upper parts, and slender towards the middle; but this is the general shape of all the true Baboons: its colour is an uniform greyish brown, paler beneath; the hairs on the upper parts, if narowly inspected, appear as if mottled; the face is long, and of a tawny flesh colour; the eyes appear as if sunk into the head or very deeply seated, and are of a hazel colour. The hands and feet have strong, blunt claws; but the thumbs of the hands have rounded nails. The tail is very short. This is certainly the Sphinx of Gesner, the synonyms to which are erroneously applied both by Linnæus and Mr. Pennant. In Gmelin's edition of the Systema Naturæ they are rectified. This also seems to be the species intended by the Count de Buffon, and figured in his Natural History. It is ferocious in its manners, and its appearance is, at once, grotesque and formidable. The region surrounding the tail, to a considerable distance on each

COMMON BABOON

side, is perfectly bare and callous, and of a red colour: this is also common, in a greater or smaller degree, to the rest of this division. It is a native of the island of Borneo.

VARIEGATED BABOON.

Simia Mormon. *S. semicaudata subbarbata nigro-fusca, malis tumidis nudis cyaneis, oblique striatis, natibus calvis sanguineis. Lin. Syst. Nat. Gmel.*

Short-tailed tawny-brown Baboon, with callosities behind, naked tumid violet-blue cheeks obliquely furrowed, and the middle of the nose blood-red.

Alstroemer Act. Holmiens. 1766. *vol.* 27. *p.* 138.

Mantegar. *Philos. Trans. n.* 220. *Bradley nat.* 117. *t.* 15. *f.* 1.

Chloras. *Breslaner Natur-u Kunstgesch,* 15. *vers.* 177.

Great Baboon. *Pennant Quadr.* 188. *t.* 40. 41.

Variegated Baboon. *Museum Leverianum. No.* 1. *p.* 35. *t.* 9.

THIS is at least equal in size, if not superior, to the former, and, when in an upright posture, is about five feet high. It is the most remarkable of the whole genus for brilliancy and variety of colour. The general tinge is a rich and very deep yellowish-brown; the hairs, if viewed near, appearing speckled with yellow and black. The form of the face is long, with the snout ending somewhat abruptly: the whole length of the nose, down the middle, is of a deep blood-red; but the parts on each side are of a fine violet-blue, deeply marked by several oblique furrows. The remainder of the face is of a pale whitish-yel-

low. On the top of the front the hair rises, in a remarkable manner, into a pointed form, and beneath the chin is a pointed beard of a light orange-yellow. Round the back of the neck the hair is much longer than in other parts, and inclines downwards and forwards, somewhat in the manner of a wreath or tippet. The hair on this part has also a slight tinge of violet-brown. The breast and lower parts of the body are of a whitish colour. Round the region of the loins the skin is almost bare, and of a most beautiful violet-blue, gradually altering into a vivid vermilion, which is more conspicuous on the hinder parts, where it surrounds the tail, which is extremely short, or scarce apparent. The hands and feet are of a dusky colour, and are furnished with broad but pointed claws. It is a native of the interior parts of Africa; but it is said to have been also brought from India. In the Leverian Museum is a most capital specimen of this Baboon, of which a general figure is given in Mr. Pennant's History of Quadrupeds; but a much more elegant and accurate one may be found in the Museum Leverianum.

A disfigured specimen of this curious animal, altered by cropping away the hair on the head and other parts, seems to have given rise to the description by Dr. Bradley, and that in the Philosophical Transactions, vol. xxiv. p. 1571, from whence it was inserted, by Mr. Pennant, into the first edition of his History of Quadrupeds, under the title of

the tufted Ape, and, as usual in such cases, has been thence transferred into some other works *.

The variegated Baboon is of a fierce disposition, and extremely muscular and strong. Its voice somewhat resembles the slight roar of a lion: it is a rare species, and is not often imported into Europe. Mr. Pennant observes, that its posture, when walking, is a proof of the excellency of Gesner's figure, which, from its singularity of appearance, had often been thought erroneous; but it is certain that Gesner's figure represents the common or brown Baboon, and the general outline of the body is nearly the same in both.

* In the drawing, which is a very indifferent one, now preserved in the British Museum, not only the nose, on each side, but also the bare part of the forehead, even to some distance beyond the ears, is represented of a fine blue; and the ridge and tip of the nose red. Upon the whole, I believe there can remain but little doubt of its having been made either from a disfigured specimen, or else hastily and erroneously drawn in some particulars, and, perhaps, coloured afterwards from recollection. The whole upper part of the animal is coloured grey-brown; and the whole under part dull flesh colour; seeming quite void of hair, as well as the insides of the limbs. In the same volume of drawings are also two other representations, evidently intended for the same animal: they are rather better painted than the former, but with the same particularities.

MAIMON.

Simia Maimon. *S. semicaudata subbarbata, genis cæruleis striatis, natibus calvis. Lin. Syst. Nat. Gmel.*

Short-tailed olive-brown Baboon, with callosities behind, naked violet-blue furrowed cheeks, and the middle of the nose flesh-coloured.

Mandrill. *Buff.* 14. *t.* 16. 17.

Ribbed-nose Baboon. *Pennant Quadr. p.* 190.

Maimon. *Schreber.* 1. *t.* 7.

Maimon. *Speculum Linnæanum.* No. 1. *t.* 2.

THE synonyms between this species and the former are commonly confounded. It is described by the Count de Buffon under the name of Mandrill. He seems to have seen an unhealthy specimen, since he describes it as dull, heavy, and, at the same time, disagreeably dirty in its appearance. On the contrary, it is an active animal, and seems far less indocile and malignant than the rest of the Baboons. The general likeness which it bears to the former species, is such as to give the idea of the same animal in a less advanced state of growth, and with less brilliant colours; the nose, instead of being red on its upper part, is merely flesh-coloured; but the sides are blue and furrowed, as in the former species. There is, however, no appearance of the crimson and blue tinge round the loins; and the general colours are less bright. The chin, as in the former species, is furnished with a small sharp-pointed beard of a pale orange colour. The feet are armed with claws, and have no flattened nails.

Miles sculp.

MAIMON.

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This Baboon is not uncommon in exhibitions of animals. Its length, from nose to tail, is about two feet. Tail exactly as in the former.

HOG-FACED BABOON.

Simia porcaria. *S. semicaudata, capite suillo, rostro nudo, corpore fusco-olivaceo, natibus tectis, unguibus acuminatis. Lin. Syst. Nat. Gmel. Boddaert Naturf.* 22. *p.* 17. *t.* 1. 2.?

Short-tailed brown Baboon, covered behind, with black naked hog-like face, and pointed nails.

Hog-faced Baboon. *Penn. Quadr. p.* 187.?

This animal is described by Dr. Boddaert, in a German work, entitled Der Naturforcher. It is said to be three feet six inches in length: its colour is a deep olive-brown; the face large and black; the nose truncated at the end, somewhat like that of a hog: the nails are sharp: the tail appears, from the figure, to be about the length of the leg, from the knee to the foot: there are no bare spaces behind; but the lower part of the abdomen seems bare, and of a dull flesh colour. On a general view it seems not unlike the Wood Baboon, except in the greater length of the tail. Dr. Boddaert imagines it to have been the χοιροπιθηκος of Aristotle. It is said to be a native of Africa. The Hog-faced Baboon of Mr. Pennant appears to be a very different species, and was introduced into the History of Quadrupeds on the authority of a drawing in the British Museum; but as he has given no description of its colour, it is necessary

to observe, that the prevailing cast of the figure is a dull olive-brown, paler beneath; with a face exactly resembling that of the S. Mormon, of which I take it to be a bad general representation. The memorandum under the drawing states it to have been two feet and a half high.

WOOD BABOON.

Simia Sylvicola. *S. semicaudata griseoferruginea, facie manibus pedibusque nigris, natibus calvis. Museum Leverianum. No. 5. p. 201. t. 1.*

Short-tailed ferruginous-brown Baboon, with callosities behind, and with black naked face hands and feet.

Wood Baboon. *Pennant Quadr. p. 191. pl. 42.*

Le Babouin des bois. *Buff. Hist. Nat. suppl. tom. 7. p. 39. pl. 7.*

This species is very finely figured in the Museum Leverianum. It is of a robust frame, and is in height about three feet. Its general colour is a sort of ferruginous greyish-brown, owing to the alternate blackish and ferruginous rings with which every individual hair is marked, and which give a kind of freckled appearance to the whole. The face, hands, and feet, are black; the nails on the hand longish, but rounded at their extremities; those on the toes somewhat longer and more acuminate. The space on each side the tail is large, bare, and red. The tail scarce three inches in length. It is an African species, and is said to be principally found in Guinea.

WOOD BABOON.

White sculp.

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YELLOW BABOON.

Simia Sublutea. *S. semicaudata sublutea nigro irrorata, facie nigra nuda, manibus supra pilosis.*

Short-tailed yellow Baboon, freckled with black, with naked black face, and hands hairy on their upper surface.

Yellow Baboon. *Pennant Quadr. p.* 191.

This, which Mr. Pennant describes from a specimen in the Leverian Museum, has a long, black face like the former, which it greatly resembles, except in being smaller, and of a brighter colour; the hair being bright-yellow, mottled with black. The hands, on their upper surface, are covered with hair, and over the eyes are some long dusky hairs. It is about two feet in length, and is supposed to be a native of Africa.

CINEREOUS BABOON.

S. Cinerea. *S. semicaudata cinerea, vertice flavo irrorato, facie fusca, barba pallida.*

Short-tailed cinereous Baboon, with the crown mottled with yellow; the face brown; the beard pale.

Cinereous Baboon. *Pennant Quadr. p.* 97.

About the size of the preceding: face dusky: beard pale brown: crown mottled with yellow: body and limbs cinereous-brown. It is supposed to be a native of Africa, and is in the Leverian Museum.

BROAD-TOOTHED BABOON.

S. Dentata. *S. semicaudata. cinereo-ferruginea, facie subcærulea, dentibus primoribus permagnis.*

Short-tailed ash-brown Baboon, with blueish face and very large fore-teeth.

Broad-toothed Baboon. *Pennant Quadr.*

With a blueish face; two very flat broad fore-teeth; a pale-brown beard; long hairs over each eye; a tuft of hair beyond each ear; the hair black and cinereous, mixed with dull rust colour. Length about three feet. Native country uncertain. In the Leverian Museum. Mons. Cepede, in his additions to the Natural History of Count de Buffon, considers these three last animals as varieties of the Sylvicola or Wood Baboon.

BROWN BABOON.

S. Fusca. *S. semicaudata fusca, subtus cinerea, facie albida, naso lato, auriculis acuminatis, natibus calvis.*

Shortish-tailed brown Baboon, with callosities behind, a whitish face, and very broad nose.

Brown Baboon. *Pennant Quadr. p.* 192.

Simia Platypygos. *Schreb. Quadr. pl.* 5. B.?

Babouin à longues jambes. *Buff. Hist. Nat. suppl.* 7. *p.* 41. *pl.* 8.

With pointed ears; face of a dirty-white; nose large and broad; hairs round the face short and straight; colour of the upper parts of the body brown; of the under ash colour. Tail about four

PURPLE-FACED MONKEY.

BROWN BABOON.

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PIG-TAILED BABOON.

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inches long; taper, and almost bare: beneath the tail quite bare.

This, according to Cepede, is the same with the Long-legged Baboon (Babouin à longues jambes) described in the additions to Buffon. The figure there given is the same with that in Mr. Pennant's Quadrupeds; but Mr. Cepede contends that the tail is represented much too long. The principal distinguishing character of the animal seems to be the great length of its limbs.

PIG-TAILED BABOON.

Simia Nemestrina. *S. semicaudata subbarbata grisea, iridibus, natibus tectis. Lin.*

Olive-brown Baboon, with short naked tail.

Pig-tailed Monkey. *Edwards, pl.* 214.

Pig-tailed Baboon. *Pennant Quadr. p.* 193.

Le Maimon. *Buff.* 14. *t.* 19.

This is a small species, commonly about the size of a cat, but sometimes much larger. The face is somewhat pointed, of a swarthy flesh colour, and naked; the ears large and of a similar colour: the general colour of the animal is an olive-brown, paler or whitish beneath. The fingers are black; the thumbs on the hind feet very long, and connected to the nearest toe by a broad membrane. The tail is about four inches long, and exactly resembles that of a Pig. On each side the tail are bare spaces, as in other Baboons,

but smaller in proportion. This species is figured by Edwards, at plate 214 of his work on Natural History. Mr. Edwards informs us, that he carried his in order to compare it with a much larger one of the same species, to Bartholomew fair, and that " they seemed to be highly pleased with each other's company, though it was the first time of their meeting*."

CRESTED BABOON.

S. semicaudata nigra, capillitio diffuso, pectore albido, facie manibusque nudis.

Short-tailed black Baboon, with very long hair on the crown and cheeks, the breast whitish, the face and hands bare.

Crested Baboon. *Pennant Quadr. p.* 193.

WITH the hairs on the crown very long and dishevelled: those on the cheeks of the same form and of a dusky colour: breast whitish: rest of the body covered with long black hair; that on the limbs the same: face and feet black and bare: tail slender, taper, about seven inches long: whole length of the animal two feet. Inhabits India.

* Edwards's figure, though, doubtless, a faithful representation of the individual specimen from which it was drawn (and which seems to have been a small or half grown one), represents the animal, with a face not sufficiently thick and large: the beſt figure is that of Buffon, which is, indeed, excellent. Buffon very properly observes, that, in its general appearance, except the pig-like tail, it so perfectly represents the Macaque, or Cynomolgus, that one might suppose it a variety of that species.

Described by Mr. Pennant from the specimen in the Leverian Museum.

LITTLE BABOON.

Simia Apedia. *S. semicaudata, palmarum pollice approximato, unguibus oblongis: pollicum rotundatis; natibus tectis. Lin.*

Short-tailed yellowish Baboon, without callosities behind; with thumbs standing close to the fingers and furnished with rounded nails; the fingers with narrow ones.

Little Baboon. *Pennant Quadr. p.* 192.

This is said by Linnæus to be of the size of a Squirrel; but, in a description given in the Amoenitates Academicæ, it is said to be as large as a Cat. The general colour is yellowish; the hairs being tipped with black: face brown, with a few scattered hairs: head roundish; ears roundish and naked: tail scarce an inch long. No bare spaces on each side: the thumbs not remote from the fingers, and with rounded nails; those on the fingers narrow and compressed. Native of India: said to be a lively species.

The next Division of the Baboons consists of such as have long tails. Of these the chief is, the

DOG-FACED BABOON.

Simia Hamadryas. *S. caudata cinerea, auribus comosis, unguibus acutiusculis, natibus calvis. Lin.*

Tailed grey Baboon, with callosities behind, sharpish claws, and the hair on each ſide the head very long.

Simia supra aures comata. *Alpin. Hist. Nat. Ægypt. p.* 242. *t.* 17. 19.

Dog-faced Baboon. *Pennant Quadr. p.* 194.

S. Hamadryas. Grey Baboon. *Speculum Linnæanum,* 1. *t.* 3.

Babouin a museau de chien. *Buff. suppl.* 7. *p.*

THIS species is of an elegant colour, composed of a mixture of grey and brown, the hair appearing as if speckled. It is a very large animal, at least equal, if not superior, in size to the common brown Baboon and the Mormon. It is remarkable for a vast quantity of flowing hair on each side the head, as well as round the shoulders, spreading in such a manner as to give the appearance of a short cloak or mantle. The whole face is naked and of a flesh colour, more or less deep in different individuals. The eyes are deeply seated, and of a chesnut colour. The bare spaces on each side the tail are very large, protuberant, and of a very bright flesh colour, or rather red. The tail is almost the length of the body, and is commonly a little tufted at the end. The nails on the hands or fore-feet are flat; those on the hind-feet resemble strong claws. This is a rare

species in comparison with the Common Baboon; and is a native of the hottest parts of Africa and Asia, where it is said to reside in vast troops, and to be very fierce and dangerous. There is a wonderful degree of sagacity in the countenance of this animal, and a kind of solemn contemplative disposition seems to be strongly indicated in its looks, when calm and undisturbed; but when irritated, the most striking efforts of vindictive violence are immediately exhibited. It is also possessed of an uncommon degree of obstinate moroseness, surpassing most others of its tribe, and is, when in a state of confinement, of a disposition so rude and unquiet, and of manners so peculiarly indecorous as generally to frustrate all attempts to civilize and reclaim it.

A supposed variety of this species, called by Mr. Pennant the *Ursine Baboon,* is said to be not uncommon in the neighbourhood of the Cape of Good Hope; of a dusky colour, and covered all over with long shaggy hair; it is nearly of the size of a man: the head very large; the nose long and thick; the ears short and thick, and the crown of the head covered with long upright hair: the tail is of the length of the body, and the bare spaces on each side of a blood-red colour. This variety is said to inhabit the mountainous parts about the Cape, and to descend occasionally into the plains in order to pillage gardens and plantations.

The figure of the S. Hamadryas, in the Speculum Linnæanum, was a real portrait from an un-

commonly fine specimen exhibited in this metropolis; and is, therefore, here repeated, in order to give as complete an idea as possible of so remarkable a species.

The animal, mentioned by Mr. Pennant in the last edition of his History of Quadrupeds, under the title of the *Mottled Baboon,* seems to be no other than the great brown Baboon already described; and the smaller animal mentioned in the same article, and termed the *Little Baboon,* appears, as he has himself observed, to be no other than the young or half-grown specimen of the former.

LION-TAILED BABOON.

Simia Ferox. *S. caudata barbata nigra, barba amplissima albida. Museum Leverianum, p.* 69.

Tailed black Baboon, with very large whitish spreading beard.

Cercopithecus barbatus niger, barba incana promissa. *Raj. Quadr. p.* 158.

Simia Silenus? *Lin. Syst. Nat.*

Ouanderou. *Buff.* 14. *p.* 169. *pl.* 18.

Lion-tailed Baboon. *Pennant Quadr. p.* 198. *pl.* 44.

This species is remarkable in its appearance. It is equal to a middle-sized dog, and is entirely coal-black; except the beard, which is extremely large, and either white or of a very light grey. It surrounds the face to a considerable distance, and gives an air of uncommon fierceness to the animal. The tail is of a moderate length, and is terminated by a tuft. The nails are flat; the teeth remarkably large and strong. It is very

Heath sculp.

elegantly figured in the Museum Leverianum. It is a native of the East Indies, particularly of the island of Ceylon, where it resides in woods; it is also said to be found in the interior parts of Africa. In its manners it is savage and untractable. It is necessary to observe, that the figure given by the Count de Buffon, though very good in other respects, was drawn from a mutilated specimen, in which the tail was defective, in consequence of which it does not convey a true idea of the animal. I have sometimes thought it not improbable that the strange figure in Gesner, p. 859, which is also given by Aldrovandus, p. 249, and copied by Dr. Tyson at fig. 17 of his work on the Oran Otan, might, in reality, have owed its origin to this species of Baboon; of which it may pass for a very bad representation, with the additional circumstance of being figured with scarce any hair on the body, in order to give it more of the human appearance.

This species seems to vary in a remarkable manner, being either of a light grey, or perfectly white, with the beard black, so as to present an appearance exactly opposite, in point of colour, to the animal above-described. In this state it has been considered as distinct, by some authors, and is placed as such in the Gmelinian edition of the Systema Naturæ, under the title of *S. veter.* In this white state it is found in Ceylon.

Mr. Pennant also seems to consider the *S. Faunus* of Lin. as another variety of this species.

DOG-TAILED BABOON.

Simia Cynosuros. *S. caudata imberbis, facie elongata, fronte fuliginosa, fascia superciliari albida, genitalibus masculis coloratis, unguibus convexis. Scopoli delic. flor. et faun. insubr. P. 1. p. 44. t. 19. Lin. Syst. Nat. Gmel. p. 30.*

Pale-brown beardless Baboon, with callosities behind, and with longish flesh-coloured face, a whitish band across the forehead, and a longish sharp-pointed tail.

THIS animal is described by Scopoli, who informs us that it was about the size of a middling dog; being nearly two feet from nose to tail: it had cheek-pouches, and bare spaces behind, though in the figure accompanying his description this particular does not appear. The plate in the coloured copy of the above work, in the Banksian Library, is represented of a very pale straw-coloured brown, nearly white beneath: the face and ears very slightly dusky; eyes and eyelids very pale brown; across the forehead, over the eyes, a broad white band; tail long, thin, and sharp-pointed. The face appears uncommonly mild and placid. It was very fond of snuff, which it would also occasionally rub over its body in a ridiculous style.

WRINKLED BABOON.

S. caudata fusco-flavescens, subtus albidà, facie incarnata, natibus calvis sanguineis rugosis.

Short-tailed yellowish-brown Baboon, whitish beneath; with flesh-coloured face, and large blood-red wrinkled callosities behind.

Simia erythræa. *Schreb. suppl.*

Macaque a queue courte. *Buff. suppl. 7. p. 56. pl. 13.*

THIS species occurs in the supplement to Buffon, under the title of *Macaque a queue courte,* and, except in size and the shortness of the tail, seems extremely allied to the preceding animal: it has also a great affinity to the *S. nemestrina,* or *Pig-tailed Baboon.* It was fifteen inches long: the nose flattish, with a sort of sinking on the upper part, owing to the projection of the os frontis: the iris of the eye yellowish: the ears round and of a flesh-colour, having a small scollop or insection on the back part, so as to appear different from the Hare-lipped Monkey, to which, except in having a short tail, it is also allied: its face is flesh-coloured; the callosities behind, and the neighbouring space, of a blood-red, and marked with strong wrinkles. The upper part of the body was of a yellowish-green tinge, mixed with a little grey. The outsides of the limbs grey also. The under parts of body and limbs whitish. The tail was seven inches and two lines long, and of a grey-colour.

To the Baboons succeed the Monkies, properly so called: they have commonly a pair of pouches in the lower jaw, for the temporary reception of their food; a circumstance which occurs also in some of the Baboons. Their tails are long, and, in most species, a bare or callous space appears on each side the tail.

MONKIES.

LEONINE MONKEY.

Simia Leonina. *S. caudata barbata nigra, barba amplissima albida, caudæ prælongæ apice floccoso, natibus calvis.*
Black Monkey, with callosities behind, very large whitish beard, and very long tufted tail.
Guenon à crinière. *Buff. suppl.* 7. *p.* 81. *pl.* 22.

This species was described from the living animal in the possession of the Duc de Bouillon; and was in the Royal Menagerie at Versailles, in the year 1775. Its length was two feet, from nose to tail, and it was eighteen inches high when standing on all-fours. The legs were long in proportion to the body: the face naked and quite black: the whole body and limbs of the same colour; the hair, though long, appearing short, on account of its lying smooth: around the face, according to Buffon's figure, is a fine long chevelure of grey-brown hair, and a large beard of fair grey.

LEONINE MONKEY.

Tayler sculp.

1800 Feb. 1. London Publish'd by G. Kearsley Fleet Street.

The chevelure or spreading hair round the face, stretches upwards over the eyes and forehead, so as to encircle the whole head in a remarkable manner, as in the Ouanderou or Lion-tailed Baboon, to which, indeed, from the figure as well as description, it appears so extremely similar, that it might well pass for a variety of that animal. The eyes are of a deep brown; the nose flat, and the nostrils large and separated like those of the Ouanderou; from which, however, it differs in the far superior length of the tail, which measures twenty-seven inches, and is tufted at the end. It has callosities behind: the feet and hands are a little hairy, but the fingers are naked: the ears also are naked, flat, round, and hid by the hair. It was supposed to be a native of Abyssinia.

HARE-LIPPED MONKEY.

Simia Cynomolgus. *S. caudata imberbis, naribus bifidis elatis, cauda arcuata, natibus calvis. Lin. Syst. Nat. p.* 38.

Long-tailed beardless Monkey, with callosities behind, rising bifid nostrils, and arched tail.

S. Cynocephalus? *S. caudata imberbis flavescens, ore producto, cauda recta, natibus calvis. Lin. Syst. Nat. p.* 38.

Macaque. *Buff.* 14. *p.* 190. *t.* 20.

Hare-lipped Monkey. *Pennant Quadr. p.* 200.

This species is supposed by Mr. Pennant to include the Cynomolgus and Cynocephalus of Linnæus. It is of a thick and clumsy form, and bears a great general resemblance to the Barbary Ape, except in having a long tail. In

size it appears to vary greatly; some specimens scarce exceeding the size of a cat, while others have been seen as large as a small greyhound. The colour also varies, being sometimes olive-brown at other times grey-brown. The head is large; the eyes small; the nose thick, flat, and wrinkled; on each side the tail is a bare space; the under side of the body and the insides of the limbs of a light ash-colour. It is a native of Guinea and Angola. The nostrils are divided, like those of a hare.*

PURPLE-FACED MONKEY.

S. Veter? *S. caudata barbata alba, barba nigra. Lin. Syst. Nat. p.* 36.

Long-tailed bearded white Monkey, with black beard.

Purple-faced Monkey. *Pennant Quadr. p.* 199.

Guenon a face pourpre. *Buff. suppl.* 7. *p.* 80. *pl.* 21.

This, which Mr. Pennant describes from a drawing communicated to him by Mr. Loten, has a black body; purple face and hands; a large triangular white beard, short and pointed at bottom, and extending on each side in the manner of wings. The tail is much longer than the body, and is terminated by a dirty white tuft. It is a native of Ceylon, and is of gentle manners. Mr. Pen-

* The Cynomolgus and Cynocephalus of Linnæus may perhaps be really distinct species; but from his specific characters it seems scarce possible to determine this point.

nant's figure from Mr. Loten's drawing abovementioned is copied in the supplement to Buffon. This species is said to be sometimes seen entirely white; but differing in no other respect. In this state it should seem to be the Simia Veter of Linnæus.

PALATINE MONKEY.

Simia Roloway. *S. caudata barbata, capite, dorso, manibus pedibusque extrinsecus nigris, interius una cum abdomine et corona pilorum faciem triquetram ambiente albis. Lin. Syst. Nat. Gmel. p.* 35.

Long-tailed bearded blackish Monkey, white beneath, with triangular face, surrounded by a white beard divided at the bottom.

Palatine ou Roloway. *Allam. Buff.* 15. *p.* 77. *t.* 13. *Buff. suppl.* 7. *p.* 77. *pl.* 20.

Palatine Monkey. *Pennant Quadr. p.* 200.

The Palatine Monkey is about a foot and half high, with a tail the length of the body. The face is black, triangular, and bordered all round with white hair, which, on the chin, divides into a forked beard: the back is dusky: the head, sides, and outsides of the arms and thighs the same, but each hair tipped with white: the breast, belly, and inside of the limbs white, in those which are shewn in Europe; but in Guinea (their native country) said to be orange-coloured; the alteration of climate causing the colour to fade.

SPOTTED MONKEY.

S. Diana. *S. caudata barbata, fronte barbaque fastigiata. Lin. Syst. Nat. p.* 38. *Act. Stockh.* 1754. *p.* 210. *t.* 6.

Long-tailed blackish Monkey, freckled with white; the hair of the forehead and beard growing in a pointed form, with a lunated band across the forehead.

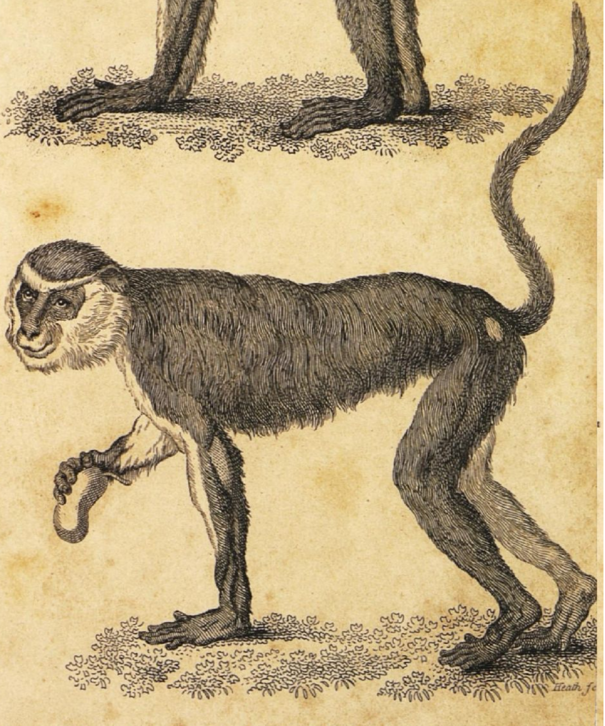
Le Mona. *Buff. suppl.* 7. *p.* 75. *pl.* 19.?

Spotted Monkey. *Pennant Quadr. p.* 201.

MR. PENNANT describes this species as of a middling size, and of a reddish colour on the upper parts, as if singed, and marked with white specks; the belly and chin whitish; the tail very long. The Linnæan description differs. Linnæus says the animal is of the size of a large cat, and is black, spotted with white: the hind part of the back ferruginous: the face black: from the top of the nose a white line, passing over each eye to the ears in an arched direction: (this circumstance was probably the reason of the Linnæan name *Diana*, by which he has chosen to distinguish the animal:) the beard pointed, black above, white beneath, and placed on a kind of fatty tumor: breast and throat white: from the rump across the thighs a white line: tail long, straight, and black: ears and feet of the same colour: canine teeth large.

This same species is figured and described in the Count de Buffon's supplement, under the name of *le Mona*, and that author seems to consider it as a variety of the *Mone*, formerly described in his 14th volume, (Varied Monkey of Pennant). It was

SPOTTED, OR DIANA MONKEY.



MONA.

[illegible] London Publish'd by G.Kearsley. Fleet Street.

from the coast of Guinea, and, in general appearance, as to size and colour resembled the *Mone* before-mentioned; but it wás of a more active nature, and had a greater lightness in the form of its limbs: the head rather smaller, and the physiognomy in consequence more agreeable. The ears had no slope on their upper margin, as in the former, and these seemed its principal differences. It had cheek-pouches and callosities behind. The face was of a slate-grey: the nose flat and large; the eyes deep, and with orange-coloured irides; the mouth and jaws of a pale red; the cheeks garnished with greyish and greenish-yellow hairs, forming a thick beard, and going under the chin. Over the forehead a black band as far as the ears, which were flat and black, except that the orifice of the auditory passage was covered with large greyish hairs. On the front, above the black line, was white-grey band, largest in the middle, and in the shape of a crescent. The top of the head and of the neck were covered with greenish hairs mixed with black ones: the body with brown and yellow hairs, giving an olive-coloured cast: the exterior surface of the limbs was black; the interior white, forming a strong contrast: the whole of the under part of the body and of the tail was white also: on each side the tail an oblong white patch: the hands and feet black: the tail very long, and covered above with short blackish hair. This animal was two years old, and measured sixteen inches and four lines from nose to tail: the tail was more

than twenty inches long. The teeth were thirty-two in number; sixteen above and the same number below: four cutting-teeth, two canine, and two grinders, on each side: the two superior canine teeth much longer than the inferior ones. It was of a mild and gentle disposition, and even timid. It eat bread, fruits, and roots. The Count de Buffon repeats what he had before observed, that the Exquima of Marcgrave is a very different animal, being a native of America; having a prehensile tail, and consequently belonging to a different division in the genus. With respect to the variety above-mentioned, it should seem to be the same with the Diana of Linnæus, differing chiefly in the want of the white band along the outside of the thighs.

LONG-NOSED MONKEY.

Simia Nasuta. *S. caudata nigro-ferruginea, subtus albido-cinerea, facie elongata nuda incarnata.*

Blackish-ferruginous long-tailed Monkey, pale ash-coloured beneath, with long naked flesh-coloured face.

La Guenon a museau allongé. *Buff. suppl. 7. p. 60. pl. 15.*

Two remarkable Monkies are represented in Mr. Pennant's History of Quadrupeds, from drawings by a Mr. Paillou. The one is called the *Long-nosed Monkey*; it has a very long and slender nose, covered with a flesh-coloured skin; the hair on the forehead falls back: on the body and breast it is long: the colour of the head and upper parts is

LONG-NOSED MONKEY. PRUDE MONKEY.

pale ferruginous mixed with black; of the breast and belly light ash-colour: tail very long: height when sitting down, about two feet. Native country uncertain: probably Africa. Its face has very much the appearance of a long-nosed dog.

The other is called, by Mr. Pennant, the *prude* Monkey; and of this he gives no particular description.

YELLOWISH MONKEY.

Simia Flavescens. *S. caudata barbata cinereo-flavescens, facie auribusque nigris.*

Long-tailed bearded cinereous-yellow Monkey, with black face and ears.

Yellowiſh Monkey. *Pennant Quadr. p.* 203.

It is about the size of a fox, and its colour on the upper part is cinereous mixed with yellow; but the throat and breast are of a yellowish white. On the lower part of the arms and legs, as well as on the tail, the cinereous colour prevails. The hair on the body is coarse, and the tail is of the same length with the body. The face and ears are black; the latter large: the canine teeth are large, and on the sides of the cheeks are long hairs of a pale yellow, pointing backwards: there are also long hairs alove each eye. This is described from a specimen in the Leverian Museum, and is supposed to be a native of Guinea.

GREEN MONKEY.

S. Sabæa. *S. caudata imberbis flavicans, facie atra, cauda cinerea, natibus calvis. Lin. Syst. Nat. p.* 38.

Long-tailed yellowish-grey Monkey, with black face and callosities behind.

Le Callitriche. *Buff.* 14. *p.* 272. *pl.* 37.

Green Monkey. *Pennant Quadr. p.* 203.

THIS is one of the most elegant of the tribe. It is generally about the size of a Cat. Its prevailing colour is a fine olive, which when narrowly inspected, seems a little varied with grey. The under parts of the animal and the insides of the limbs are of a light silvery grey. The face is of a dusky reddish or swarthy flesh colour; the nose black; the cheeks furnished with thick and long pale-yellow hair, falling back on each side the face, and almost covering the ears, which are shaped like the human, and of a black colour. This species is a native of several parts of Africa, where, like most other Monkies, it inhabits woods. It is also said to be found in some parts of the East Indies. In its native regions the colour is said to be much more elegant than when imported into Europe: the beautiful green soon fading into an olive colour. It is, however, in general, sufficient to ascertain the species, which is therefore commonly known by the name of the Green Monkey. It has been extremely well figured by Edwards.

CHINESE MONKEY.

MANGABEY.

WHITE-EYELID MONKEY.

S. Aethiops. *S. caudata imberbis, capillitio erecto lunulaque frontis albis. Lin. Syst. Nat. Gmel. p.* 33.

Long-tailed beardless Monkey, with black face, white eyelids, white frontal band, and the hair on the forehead upright.

Mangabey. *Buff.* 14. *p.* 244. *pl.* 82. 83.

White-eyelid Monkey. *Pennant Quadr. p.* 204.

The very remarkable appearance of the eyelids is alone sufficient to distinguish this species from most others: they are of a clear white, and the face itself is black, void of hair, and shaped somewhat like that of a Dog. It is about the size of a Cat, and is generally of a very deep or blackish colour, with a tinge of ferruginous on the upper parts. It is known to vary, however, sometimes with the throat and space round the neck white: the tip of the tail also is in some white, and in others ferruginous; in others the cheeks, neck, and whole under side of the body are white. Though the white eyelids in this Monkey form a remarkable character, yet they are not peculiar to this species alone.

MUSTACHE MONKEY.

S. Cephus. Lin. *S. caudata, buccis barbatis, vertice flavescente, pedibus nigris, cauda apice ferruginea.* *Lin. Syst. Nat. p.* 39.

Long-tailed blackish-ferruginous Monkey, whitish beneath, with bearded cheeks and yellowish crown; the eyelids and muzzle whitish.

Moustac. *Buff.* 14. *p.* 283. *pl.* 39.

The Mustache M. *Pennant Quadr. p.* 205.

THE body of the Mustache is about a foot in length, and the tail about a foot and half. The general colour of the animal is reddish-cinereous, the head inclining to yellowish, but mixed or shaded with black. The under parts are paler than the upper: the upper half of the tail is of the same colour with the body; the remainder yellowish. The face is bare and of a blueish black; the nose blunt, with a dilated transverse white patch immediately below it: the edges of both lips and the space round the eyes black: on the cheeks before the ears are two large tufts of yellowish hairs like mustaches: the ears round and tufted with whitish hairs: the hair on the top of the head somewhat upright. In the Linnæan description of this species mention is made of a transverse crescent-shaped band over the eye-brows: it is also added, that the eyelids are white; but in this description Linnæus seems to have confounded it with the preceding species, or rather to have considered it in the light of a variety.

MUSTACHE MONKEY.

VARIED MONKEY.

WHITE-NOSE MONKEY.

Simia Nitctitans. *S. caudata imberbis nigra, punctis pallidis adspersa, naso albo, pollice palmarum brevissimo, natibus tectis. Lin. Syst. Nat. p.* 40.

Long-tailed beardless black Monkey, freckled with white; the nose white; the thumb of the hands very short; no callosities behind.

White-nose Monkey. *Pennant Quadr. p.* 205.

The distinguishing character of this species is the tip of the nose, which is milk-white, while the face itself is black. The general colour of the animal on the upper parts is a mixture of black and tawny, so as to appear in some lights of a black colour speckled with yellow. The under part of the body is white, and the insides of the limbs are nearly of the same colour. The tail is very long, and is black on the upper and white on the under side: the thumbs of the hands are very short. The white nose in this species, like the white eyelids in a former, is not absolutely peculiar but is found in another. It is this similarity of marks in species, which, on exact examination, turn out to be really distinct, that causes the extreme difficulty in reconciling the different descriptions of authors, and settling their discordant synonyms and figures; and it must be confessed that much uncertainty still prevails.

TALAPOIN MONKEY.

Simia Talapoin. *S. caudata barbata, buccis barbatis, auribus, naso, et pedum plantis nigris. Lin. Syst. Nat. Gmel. p.* 35.

Long-tailed olive-coloured Monkey, with bearded cheeks; the ears nose and soles of the feet black.

Talapoin. *Buff.* 14. *p.* 287. *pl.* 40.

Talapoin Monkey. *Pennant Quadr. p.* 206.

THIS is one of the smaller Monkies; it is about a foot in length, with the tail near a foot and half long. The face is of a dusky flesh colour, the nose sharp and black: the head roundish: the ears large, round and black: the hair on the sides of the face very long, and directed backwards towards the ears: on the chin is a small beard: the prevailing colour of the upper parts is a mixture of yellow and green, or olivaceous, approaching to blackness on the outsides of the limbs, while the insides and the under parts of the body are whitish or whitish-yellow: the tail is olivaceous above and ash-coloured beneath. The feet black. It is said to be a native of India.

NEGRO MONKEY.

Simia Maura. *S. caudata barbata, buccis et universa facie, palpebris et regione ab oculis ad nasi finem protensa exceptis, barbata, corpore ex luteo fusco. Lin. Syst. Nat. Gmel. p.* 35?

Long-tailed blackish Monkey, with swarthy flesh-coloured face and breast; the face bearded with black hairs.

Middle-sized black Monkey. *Edwards, pl.* 311.

Negro Monkey. *Pennant Quadr. p.* 206.

That sagacious observer, Mr. George Edwards, so well known by his admirable illustrations of Natural History, seems to have been the first describer of this species. Its size is that of a large cat. The face, breast, and whole under parts are of a swarthy flesh colour, and nearly naked or but very slightly covered with hair. The head, upper parts, and tail are covered with longish black hair. The head is round: the nose rather sharp: the hair above the eyes long, and uniting with the eye-brows: that on the temples partly covering the ears: the paws are covered with a black soft skin: the tail is longer than the body. It is said to be a native of Ceylon and Guinea.

EGRET MONKEY.

S. Aygula. *S. caudata subimberbis grisea, eminentia pilosa verticis reversa longitudinali. Lin. Syst. Nat. p.* 39.
Long-tailed beardless grey Monkey, with a rising longitudinal tuft on the crown.
Aigrette. *Buff.* 14. *p.* 190. *pl.* 21.
Egret Monkey. *Pennant Quadr. p.* 207.

THE description given by Linnæus of this species is nearly as follows: Body grey, or of the colour of a wolf, throat, breast, and under part whitish: tail longer than the body, cinereous and tapering: face flattish, whitish, and naked. Nose depressed, very short, remote from the mouth, with a double fissure of the upper lip: cheeks somewhat bearded; the hairs turning upwards. The eyebrows prominent and bristly: feet black, semipalmated: nails of the thumbs rounded; the others oblong. Ears rather sharp: a bowed suture tending downwards from each ear towards the eyes to the base of the lower jaw: longitudinal suture of the cubit. Linnæus also adds, that he had what he supposes a variety, in which the head was rounder: the face less black, and the colour of the body less ferruginous. He adds, that it was an active animal. Mr. Pennant describes the Egret as having a long face, and an upright pointed tuft of hair on the top of the head: hair on the forehead black: colour of the upper part of the body olivaceous, of the lower cinereous: eyebrows large: beard very small: size of a small cat. It is said to inhabit India, and particularly the island

of Java, and to be a very sportive and lively species; gamboling on the trees, and making a continual noise during the night. It is surmised by Mons. Cepede, that the Bonneted Monkey may perhaps be a variety of this species.

EGRET VAR.?

Monea Monkey. *Pennant Quadr. p.* 207.

THIS, which is mentioned by Mr. Pennant in his last edition of the History of Quadrupeds, is thus described: "With a high, upright, rusty tuft on the crown: limbs and body ferruginous mixed with dusky: belly and inside of the legs whitish. It is called by the Malayes *Monèa*, from which is derived the English name Monkey." No farther description is given by Mr. Pennant, nor do I know to what particular species his memorandum above-mentioned refers.

RED MONKEY.

S. Rubra. *S. caudata barbata, buccis barbatis, vertice dorso caudaque ex rufo sanguineis. Lin. Syst. Nat. Gmel. p.* 34.

Long-tailed red Monkey, pale ash-coloured beneath, with bearded cheeks and a black or white band across the forehead.

Le Patas. *Buff.* 14. *p.* 208. *pl.* 25. 26.

Red Monkey. *Pennant Quadr. p.* 208.

THE upper parts of this animal are of the most bright and vivid bay, so as almost to appear red:

the under parts and insides of the limbs are ash-coloured: the length of the body is about a foot and half; but the tail is generally not so long: the cheeks are bearded, as is also the chin, with whitish or ash-coloured hairs, and across the forehead runs a black band: but sometimes a white band is seen on the forehead instead of the black one, and the tail is longer than the body. The Count de Buffon has figured this species, with the white-banded variety also. It is a native of Senegal, inhabiting woods. A variety with a tail scarce half the usual length, is given in the supplement to Buffon.

CHINESE MONKEY.

S. Sinica. *S. caudata imberbis, capillitio undique horizontaliter caput obumbrante. Lin. Syst. Nat. Gmel. p.* 34.

Beardless pale-brown Monkey, with the hair of the crown spreading round horizontally.

Bonnet Chinois. *Buff.* 14. *p.* 224. *pl.* 30.

Chinese Monkey. *Pennant Quadr. p.* 209.

The Chinese Monkey, so named from the unusual disposition of the hair on the top of the head, which spreads out in a circular direction, somewhat in the manner of a Chinese cap, is a native of Ceylon, and is about the size of a cat. Its general colour is a pale yellowish-brown, palest on the under parts. The face is commonly dusky, and sometimes the general tinge of the animal is dusky-ferruginous. This is a species easily

distinguished when seen in a healthy state: the hair on the top of the head resembling that of a boy; as if parted in the middle, and lying smooth over the head. They are said to inhabit the woods in great troops, and to be very destructive to such gardens and plantations as lie within reach of their settlements. The tail in this species is very long: the nails of the thumbs are round; the rest long.

VAULTING MONKEY.

S. Petaurista. *S. caudata barbata, dorso, caudæ superiore et pedum anteriore latere ex olivaceo nigris, facie nigra, nasi macula triquetra nivea. Lin. Syst. Nat. Gmel. p.* 35.

Olive-black Monkey, white beneath, with a triangular snow-white spot on the nose.

Blanc-nez. *Allam. Buff.* 14. *p.* 141. *pl.* 39.

Guenon à nez blanc proéminent. *Buff. suppl.* 7. *p.* 72. *pl.* 18.

This is described by Mr. Allamand in his edition of Buffon's Natural History of Quadrupeds. It is said to be somewhat more than a foot high, and the tail about twenty inches long. The upper parts of the animal are of a dark olivaceous colour, owing to a mixture of olive-green and black hair: the face black, with a snow-white triangular spot on the nose: the chin, throat, breast, and belly, white: the under part of the tail and insides of the limbs of a blackish grey. It is a most extremely nimble and active animal, according to M. Allamand. The individual in his possession came from Guinea. It was perfectly familiar, playful,

of a gentle disposition, and so rapid in its motions that it seemed to fly rather than leap. The individual figured by Mr. Allamand was a female: his figure represents it with a large white beard round the chin; and beneath each ear appears a flattish reversed tuft of yellowish hairs, as in some other species. That represented in the supplement to Buffon was a male, and had a much smaller beard; the nose was remarkably prominent or convex: the general colour was darker than in Mr. Allamand's specimen, being rather blackish grey-brown than olive, except on the top of the head, where it was yellowish. It was described from a dried skin in good preservation; but though it was evident that it was from a young animal, yet it was somewhat larger than the former. Upon the whole, however, there can be little doubt of its belonging to the same species; and this may serve as an additional evidence of the inefficacy of mere short specific characters in ascertaining animals of this obscure and variable race.

BONNETED MONKEY.

Simia Pileata. *Simia fusco-ferruginea, subtus albido-flavescens, artubus nigris, capillitio circulatim arrecto.*

Ferruginous-brown Monkey, whitish-yellow beneath, with black limbs, and the hair of the head rising circularly upwards.

La Guenon couronnée. *Buff. suppl.* 7. *p.* 61. *pl.* 16.

Bonneted Monkey. *Pennant Quadr. p.* 210.

THIS was certainly first described by Mr. Pennant, who formed his description from a specimen in the Leverian Museum. The size and general habit of the animal are similar to those of the Capucin Monkey; but the colours somewhat darker: it seems still more strongly allied to the *Fatuellus*, or Horned Monkey, from which it principally differs in not having a prehensile tail, and in the disposition of the black hair on the head, which stands up in a kind of circular cap or bonnet, instead of two tufts as in that species. The face and breast are of a pale yellow-brown; the back deeper; and the lower part of the back, arms, and legs, blackish-brown. Mr. Buffon, in his seventh supplemental volume, describes and figures this species from a living specimen: and seems to think it most allied to the Chinese-bonnet Monkey.

VARIED MONKEY.

Simia Mona. *S. caudata barbata, lunula superciliari elata ex albo grisea. Lin. Syst. Nat. Gmel. p.* 34.

Olivaceo-ferruginous long-tailed Monkey, whitish beneath, with the cheeks bearded, and a lunated whitish band across the forehead.

La Mone. *Buff.* 14. *p.* 258. *pl.* 36.

Varied Monkey. *Pennant Quadr. p.* 210.

This is said to be the species which gives the name of Monkey to the whole tribe: from the African word *Monne;* or rather, as Mr. Pennant surmises, from its corruption *Monichus.* It is one of the larger species; being about a foot and half in length, with a tail nearly two feet long. The nose, mouth, and spaces round the eyes, are of a dull flesh colour: the cheeks are bounded by long whitish hairs inclining to yellow: the forehead is grey, and above the eyes, from ear to ear, extends a black line. The upper part of the body is dusky and tawny; the breast, belly, and inside of the limbs, white: the outside of the thighs and arms, black: hands and feet black and naked: the tail of a cinereous-brown. On each side the base of the tail is commonly an oval white spot. This species inhabits Barbary, Æthiopia, and other parts of Africa. It seems to differ very considerably in the tinge of its colours, which are sometimes vivid and sometimes rather obscure: in general it is of a blackish olive-grey

PROBOSCIS MONKEY.

above, the outsides of the limbs nearly black, and whitish beneath; the contrast between the colours being greatest on the sides of the arms and legs: the beard is sometimes grey, sometimes white, and sometimes yellowish. Perhaps the Diana Monkey may be no other than a variety of this species.

PROBOSCIS MONKEY.

Simia Nasalis. *S. caudata barbata castanea, artubus caudaque pallidis, naso prælongo.*

Long-tailed bearded chesnut-coloured Monkey, with pale limbs and tail, and very long nose.

S. Násalis. *Lin. Syst. Nat. Gmel. præfat. lin. penult.*

Guenon à long nez. *Buff. suppl. 7. p. 53. pl.* 11. 12.

Proboscis Monkey. *Pennant Quadr. 2. append. p. 322. pl.* 104. 105.

Amongst the whole tribe of Monkies this perhaps may be considered as the most singular in its aspect: the nose being of such a length and form as to present, especially in a profile view, an appearance the most grotesque imaginable; and indeed from an inspection of the figure alone, one would be apt to imagine that it must have been designed for a caricature of a Monkey. The animal, however, is preserved in the royal cabinet at Paris, and was first described by Mons. D'Aubenton. It is a large species, measuring two feet from the tip of the nose to the tail, which is more than two feet long. The face has a kind of curved form, and is of a brown colour, and marked with blue and red: the ears broad, thin, naked, and

hid within the hair. The head is large, and covered with chesnut-coloured hair: the whole body is also of a similar colour, except that on the breast, it approaches to orange. Round the throat and shoulders the hair is much longer than on the other parts, so as to form a sort of cloak, as in some of the Baboons, to which, indeed, this species seems nearly allied. It is an East-Indian animal, and is extremely rare. The form of the nose is most singular, being divided almost into two lobes at the tip; a longitudinal furrow running along the middle. It is said to be found chiefly in Cochinchina, and to grow to a very large size. It is sometimes seen in great troops, and is considered as of a ferocious disposition. It feeds only on fruits. Its native name is *khî dôc*, or Great Monkey. Some Cochinchinese, who visited the royal cabinet at Paris, immediately recognized the animal.

COCHINCHINA MONKEY.

Simia Nemæus. *S. caudata imberbis, buccis barbatis cauda alba. Lin. Syst. Nat. Gmel. p.* 34.
Long-tailed Monkey, with bearded cheeks and white tail.
Douc. *Buff.* 14. *p.* 298. *pl.* 41. *suppl.* 7. *pl.* 23.
Cochinchina Monkey. *Pennant Quadr. p.* 211.

The Douc or Cochinchina Monkey is a very large species, measuring at least two feet from the nose to the tail. The face is flattish and of a yellowish-bay colour; as are also the ears: across

White sculp.

COCHINCHINA MONKEY

1800 Jany 1 London Publish'd by G. Kearsley, Fleet Street.

the forehead runs a narrow dusky band. The sides of the face are bounded by long spreading yellowish-white hairs: a collar of purplish-brown surrounds the neck: the upper part of the arms and thighs black: the legs and knees chesnut-colour. The back, the under parts of the body, and sides, are of a yellowish-grey: the lower part of the arms and tail are white: the feet dusky. It is a native of Cochinchina, and also of Madagascar. It is said that a bezoar is more frequently found in the stomach of this species than of almost any other. When in an upright posture this animal measures three and a half or four feet in height; being nearly of the size of a Barbary Ape. This species seems considerably allied in its general form and colours to the preceding, but differs greatly in the form of the face.

TAWNY MONKEY.

Simia Fulva. *S. subferruginea, dorso inferiore aurantio, subtus albida, facie auribusque incarnatis.*

Subferruginous Monkey, with the lower part of the back orange-coloured, white beneath, with flesh-coloured face and ears.

Tawny Monkey. *Pennant Quadr. p.* 211.

Mr. Pennant seems to be the only describer of this animal. The face is a little produced: that and the ears flesh colour: nose flattish: long canine teeth in the lower jaw; hair on the upper part of the body pale tawny, cinereous at the roots: hind part of the back orange: legs cinere-

ous: belly white: size of a cat. Inhabits India. Mr. Pennant's description was drawn up from one in Mr. Brookes's exhibition: it was a very ill-natured animal. It is said to vary with a black face, and long black hairs on the cheeks: body of a dull pale green: limbs grey: tail dusky.

GOAT MONKEY.

Simia Hircina. *S. caudata fusca, naso cæruleo oblique sulcato, barba longa acuminata.*

Long-tailed brown Monkey, with blue nose furrowed obliquely and long pointed beard.

Goat Monkey. *Pennant Quadr. p.* 212.

WITH a blue naked face ribbed obliquely: long beard like that of a goat: whole body and limbs deep brown: tail long. Described by Mr. Pennant from a drawing in the British Museum by Kikius, an excellent painter of animals. No mention is made of the size of the animal: the face resembles that of the Simia Maimon.

FULL-BOTTOM MONKEY.

FULL-BOTTOM MONKEY.

Simia Comosa. *S. nigra, capitis coma longissima amplissima albida, cauda nivea.*
Long-tailed black Monkey, with very long spreading whitish hair on the head, and snow-white tail.
Full-bottom Monkey. *Pennant Quadr. p.* 212. *pl.* 46.
Guenon à camail. *Buff. suppl.* 7. *p.* 65. *pl.* 17.

With a short, black, and naked face: small head: that and the shoulders covered with long coarse, flowing hairs, like a full-bottomed perriwig; of a dirty yellowish colour mixed with black: body, arms, and limbs, of a glossy black: hand naked, and with only four fingers: on each foot five very long toes: tail very long, and of a snowy whiteness, with very long hairs at the end, forming a tuft: body and legs very slender: length above three feet. Inhabits Sierra Leona. This species is figured in Mr. Schreber's plates under the name of *Simia Polycomos,* but the figure is not very accurate.

BAY MONKEY.

Simia Ferruginea. *S. caudata ferruginea, artubus caudaque nigris.*
Long-tailed ferruginous Monkey, with black limbs and tail.
Bay Monkey. *Pennant Quadr. p.* 213.

With black crown: back of a deep bay colour: outside of the limbs black; cheeks, under part of body, and legs, of a very bright bay. Only four fingers on the hands: on the feet five long toes:

tail very long, slender, and black: body and limbs very slender and meagre. Native of Sierra Leona. In the Leverian Museum, as is likewise the former. In the supplement to Buffon, vol. 7. p. 66, this species is considered as a variety of the former: an opinion which surely would not have been entertained, had the author seen the animal.

ANNULATED MONKEY.

Simia Annulata. *S. fusco-ferruginea, subtus albida, cauda corpore breviore annulata.*

Ferruginous-brown Monkey, whitish beneath, with annulated tail shorter than the body.

Annulated Monkey. *Pennant Quadr. p.* 213.

Described by Mr. Pennant, from a drawing in the British Museum. Face flat: long hairs on the forehead and cheeks: upper part of the body and limbs tawny-brown: belly cinereous: tail shorter than the body, and annulated with darker and lighter brown: hands naked and black: size not mentioned.

FOX-TAILED MONKEY.

Tayler sculp.

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FOX-TAILED MONKEY.

Simia Pithecia. *S. caudata imberbis, vellere nigro apice albo, cauda nigra villosissima. Lin. Syst. Nat. p.* 40.
Blackish-brown Monkey, with the tips of the hairs whitish; the tail extremely full of hair.
Saki. *Buff.* 15. *p.* 88. *pl.* 12 *and suppl.* 7. *p.* 113, 114. *pl.* 30, 31.
S. Pithecia. *Museum Leverianum. No.* 4. *p.* 169. *t.* 5.
Fox-tailed Monkey. *Pennant Quadr. p.* 222.
Yarqué. *Buff. suppl.* 7. *p.* 113. *pl.* 30. *Singe de Nuit. p.* 114. *pl.* 31.

The Fox-tailed Monkey is about the size of a large cat, and is an animal of a very remarkable appearance. It is entirely of a dusky-brown colour, with a slight cast of ferruginous; except on the head and face; the middle of the face or nose being black, bare, and surrounded by white downy hair on the cheeks and forehead, and which, gradually expanding on the top and sides of the head, forms a very thick and full kind of beard, which divides under the chin, so as to leave in that part a bare space. This gives a highly singular aspect to the face. The eyes are large, and the ears round and flat: the feet and hands are furnished with sharpish claws: the tail is equal to the body in length, and most extremely villose or full of hair. A most elegant and perfect specimen of this animal is in the Leverian Museum, and is very finely represented in the Museum Leverianum. It is a native of Guiana. The tusks in this species are remarkably large. In the 7th supplemental volume to

Buffon two varieties are figured under the titles of *Yarqué* and *Singe de Nuit:* the former is less bearded or villose about the cheeks: the latter is in all parts more shaggy or tufted, and is considered as a particular variety, if not a distinct species.

STRIATED MONKEY.

Simia Jacchus. *S. caudata, auribus villosis patulis, cauda hirsutissima curvata, unguibus subulatis, pollicum rotundatis. Lin. Syst. Nat. p.* 40.

Long-tailed Monkey, with patulous hairy ears, incurved furry tail, and sharp claws; those on the thumbs rounded.

Cercopithecus brasilianus 3. Sagouin. *Clus. exot.* 372.

Oustiti. *Buff.* 15. *p.* 96. *pl.* 14.

Sanglin or Cagui minor. *Edwards, pl.* 218.

Striated Monkey. *Pennant Quadr. p.* 224.

The Sanglin or Striated Monkey is an animal of great elegance. It is about the size of a squirrel. The body is of a reddish-ash colour, slightly undulated with dusky shades: the face is of a dark flesh colour; and on each side are two very large and thick tufts of milk-white hair, standing out before the ears. The tail is very long, extremely thickly coated with fur of an erect growth, and beautifully varied throughout its whole length with alternate bars of black and white. The paws are covered with hair and have sharp nails. This little animal is a native of Brasil, and in its natural state is supposed to feed chiefly on fruits; but in a state of confinement it

will occasionally feed on fish, snails, insects, &c. We are informed by the Count de Buffon, that it has been known to breed in Portugal: the young are said to be very deformed at first; having very little fur on their body. Linnæus observes that it is a great enemy to cats. Its voice is a sort of shrill hissing note, and it has often a musky smell.

RED-TAILED MONKEY.

Simia Œdipus. *S. caudata imberbis, capillo dependente, cauda rubra, unguibus subulatis. Lin. Syst. Nat. p.* 41.
Long-tailed beardless Monkey, with the hair of the head spreading downwards, red tail, and sharp nails.
Pinche. *Buff.* 15. *p.* 114. *pl.* 17.
Little Lion Monkey. *Edwards, pl.* 195.
Red-tailed Monkey. *Pennant Quadr. p.* 225.

This is an animal of uncommon elegance. In size it is nearly equal to the former species, or about as large as a squirrel. The upper parts of the body are of a pale reddish-brown: the under parts white: the limbs are also white. The face black: the hair on the head white, long, loose, and spreading over the shoulders in the manner of a mantle: the lower parts of the back and the upper half of the tail are of a deep orange-red; the remainder of the tail black: the insides of the hands and feet are also black: the claws small and sharp. It is a native Guiana; and is an active, lively animal: its voice is a kind of soft

whistle, not unlike the note of a bird. Mr. Edwards, who has given a good figure of this species, which he drew from a healthy living specimen, observes, that, when gamboling about a room, it often assumes the appearance of a lion in miniature, from the manner in which it carries its tail over its back.

SILKY MONKEY.

Simia Rosalia. *S. caudata imberbis, capite piloso, faciei circumferentia pedibusque rubris, unguibus subulatis. Lin. Syst. Nat. p.* 41.

Long-tailed silky-haired yellow Monkey, with long hair on the head, reddish round the face, and pointed claws.

Silky Monkey. *Pennant Quadr. p.* 225.

Marikina. *Buff.* 15. *p.* 108. *pl.* 16.

THIS species is so named from the appearance of its hair, which is very fine, soft, long, and of a bright-yellow colour, resembling yellow silk. Round the face the hair is much longer than in other parts, so as to form a large mane like that of a lion; near the face this mane is of a reddish colour, and grows paler as it recedes from the cheeks: the face itself is of a dusky purple: the ears round and naked: the hands and feet are also naked, and of the same dull purple colour as the face: the claws are small and sharp: the tail is very long, and rather bushy at the extremity. This is a larger species than the former, measuring about ten inches from nose to tail; the tail itself being about thirteen inches long. It is a

GREAT-EARED MONKEY.

FAIR MONKEY

native of Guiana, and is a lively, active species, and gentle in a state of confinement.

GREAT-EARED MONKEY.

Simia Midas. *S. caudata imberbis, labio superiore fisso, auribus quadratis nudis, unguibus subulatis, pedibus croceis. Lin. Syst. Nat. p.* 42.

Long-tailed black Monkey, with large naked squarish ears, orange-coloured feet, and pointed nails.

Little black Monkey. *Edwards, pl.* 196.

Tamarin. *Buff.* 15. *p.* 92. *pl.* 13. *Tamarin nègre. suppl. p.* 116. *pl.* 32.

Great-eared Monkey. *Pennant Quadr. p.* 223.

The Tamarin or Great-eared Monkey is about the size of a squirrel. It is coal-black, except on the lower part of the back, which is of a reddish colour, and on the hands and feet, which are orange-coloured. The face is naked and flesh-coloured; the ears very large, naked, of a squarish form, and of a dusky flesh colour: the tail very long and black. It is a native of the hotter parts of South America. The claws are small and sharp. It is extremely well figured by Edwards. It sometimes varies in having the face black instead of flesh-coloured. In this state it is described and figured in Buffon's seventh supplemental volume, under the title of *Tamarin nègre.*

FAIR MONKEY.

Simia Argentata. *S. caudata imberbis exalbida, facie rubra, cauda fuscescente. Lin. Syst. Nat. Gmel. p.* 41.
Long-tailed beardless white Monkey, with red face and brown tail.
Mico. *Buff.* 15. *p.* 121. *pl.* 18.
Fair Monkey. *Pennant Quadr. p.* 226.

The last, and certainly the most beautiful of the smaller Monkies, is the Mico or Fair Monkey. It is somewhat larger than a squirrel, measuring from nose to tail about eight inches, and the tail itself about twelve. The whole animal, except the face and the tail, is covered with the brightest silvery-white hair: the face is of a vermilion-red: the ears of the same colour, and are thin and of a round form: the tail is of a very deep or blackish chesnut colour. This beautiful little animal is a native of South America. It is an extremely rare species. We are informed by the Count de Buffon, that Mons. Condamine, who had received one as a present from the governor of Para, attempted to bring it over to France alive; but the animal died just before the arrival of the ship, and was preserved by Mr. Condamine in spirits.

PHILIPPINE MONKEY.

PHILIPPINE MONKEY.

Simia Syrichta. *S. caudata imberbis, ore ciliisque vibrissatis. Lin. Syst. Nat. p.* 42.
Long-tailed beardless Monkey, with long hairs round the mouth and eyes.
Cercopithecus luzonicus minimus. *Petiv. gaz.* 21. *t.* 13. *f.* 11.
Philippine Monkey. *Pennant Quadr. p.* 213.

This small species (if such exists) depends merely on the authority of a drawing, with its description, communicated to Petiver, and by him represented in his work entitled *Gazophylacium, &c.* The same figure is also engraved by Mr. Schreber, in his plates of Quadrupeds. It is said to be a native of the Philippine islands, and is represented by Petiver with a young one under its body, which is supposed to have been tied there by means of a slender twig of some plant coiled round its own back.

The original from which the above figure in Petiver was copied is among the drawings of Camel (Kamel), or Camelli, as he is sometimes called, and which are now preserved in the British Museum. As a further illustration of so curious a subject cannot but be acceptable to every naturalist, I shall here give Camelli's own description, together with faithful copies of all the figures, four in number, with which his account is accompanied. These figures are reduced from the originals, in order to bring them within the compass of the annexed plate. It is impossible to determine from the figures and description whether this species should or should not be placed in the *prehensile-tailed* division of the genus.

MAGU, *sive* BOOT *Indorum.*

Cercopithecus ex Luzonis minimus. *Camel Mss. Br. Mus.*

"Magnitudinem, quæ Gliris est, icon exprimit, et communiter adhuc minor, & gracilior est. Facies leonina: oculi rubri, magni, rotundi, ut noctuæ, nunquam aut raro conniventes: aures pellucidæ, depiles. Pilus murium luteolus aut aureolus. Gesticulationes lepidæ ut Simiæ. Cauda et pedes posterius longitudinis reliqui corporis. Raro interdiu apparet, hinc eum cæcutire putant. Progreditur ordinariè saltando, et restrorsum vel in obliquum velocius quam antrorsum. Narrant vivere carbone, &c. sed falsum est, cum ficu Indica, et aliis vescatur fructibus.

"L. *A* sedens, et comedens, ut Simius dextra.

"*B* arborem scandens.

"*C* sedens et terrens, cum timet.

"*D* incedens cum prole, quam ad ventrem, plantæ volubilis *Pamago* funiculis alligatam sugientem gerit. *Pamago* vero Indi ad recidivas commendant." *Camel. Mss. tom. 6. Mus. Brit.*

"The figure shews the size of the animal, which is that of a Glis or Loir*, and it is often seen still smaller: the face is like that of a lion: the eyes red, large, and round, like those of an owl; and never, or but rarely, closing: the ears pellucid and void of hair: the fur mouse-like, and of a yellowish or gold-coloured cast. Its motions are lively, like those of a monkey. The tail and hind feet are of the length of the rest of the body.

* The greater Dormouse, or garden Squirrel.

It appears but seldom by day-time, and on that account is supposed to be dim-sighted by day. It commonly moves by springing or skipping, and that more readily either backwards or obliquely than forwards. It is said to live on charcoal, &c. but this is false*, since it feeds on the Indian fig and other fruits.

"A represents it sitting, and eating with its right hand, like a Monkey.

"B, shews it climbing a tree.

"C, sitting in the manner it appears when frighted.

"D, walking, with its young, which it carries tied to its belly, while sucking, with twigs of a climbing plant, called Pamago, and which the Indians recommend as good against relapses into sickness."

A description so particular seems to imply that Camelli had himself seen the animal, or, at least, that his authority was unquestionable. It is, however, a singular circumstance that no farther intelligence seems to have been obtained concerning it, and the species accordingly remains dubious. From some parts of the description, viz. the protuberant eye, the nocturnal appearance of

* There was surely no occasion for Camelli to tell us that this is false. To live on charcoal is probably a popular saying or jest among the Indians. When the Chinese mountebanks were haranguing the people in the streets of Pekin, during the procession of the English embassy, they affirmed that among the presents for the emperor were an elephant of the size of a monkey, and a cock that fed upon charcoal.

the animal, and its oblique and retrograde mode of incession, it should seem rather to belong to the genus Lemur than that of Simia; and seems, in some degree, allied to the small species called Lemurmurinus; but in that creature the tail is villous, not bare as in the Camellian animal. This, however, is a circumstance which does not much invalidate the idea; since, in a mere outline, the hairiness of the tail might not have been expressed.

We now arrive at the division containing those species which are furnished with *prehensile tails*, i. e. tails so constituted as to be able to clasp at pleasure round any object, so as to answer the purpose of a fifth hand. These Monkies are natives of South America.

PREACHER MONKEY.

Simia Beelzebul. *Lin.* *S. caudata barbata nigra, cauda prehensili, extremo pedibusque brunneis. Lin. Syst. Nat. p.* 37.
Bearded black Monkey, with prehensile tail; the feet and tip of the tail brown.
Preacher Monkey. *Pennant Quadr.* 214.
L'Ouarine. *Buff.* 15. *p.* 5. *and suppl.* 7. *pl.* 26.

This species is said to be of the size of a fox, and of a black colour, with smooth glossy hair; round beard beneath the chin and throat: the feet and end of the tail brown. It is a native of Brasil and Guiana, inhabiting the woods in vast numbers, and howls in a dreadful manner. Marcgrave

assures us, that one sometimes mounts the top of a branch, and assembles a multitude below: he then sets up a howl so loud and horrible, that a person at a distance would imagine that a hundred joined in the cry: after a certain space he gives a signal with his hand, when the whole assembly join in chorus; but on another signal a sudden silence prevails, and then the orator finishes his harangue. This howling faculty is owing to the conformation of the os hyoides, or throat bone, which is dilated into a bottle-shaped concavity.

ROYAL MONKEY.

Simia Seniculus. *Lin.* *S. caudata barbata rufa, cauda prehensili. Lin. Syst. Nat. p.* 37.

Long-tailed bearded red Monkey, with prehensile tail.

Alouate. *Buff.* 15. *p.* 5. *and suppl. p.* 87. *pl.* 27.

Royal Monkey. *Pennant Quadr. p.* 215.

This is sometimes considered as a variety of the former, from which it differs in being of a very bright bay colour. In other respects it is said to resemble the former. It is, however, in all probability, a distinct species. In the Leverian Museum are two which appear to be young animals. They are about the size of a squirrel, and entirely of a very bright ferruginous or reddish chesnut colour, with the face naked and black, surrounded on the lower parts by a straggling beard of black hairs, and the tail is strongly

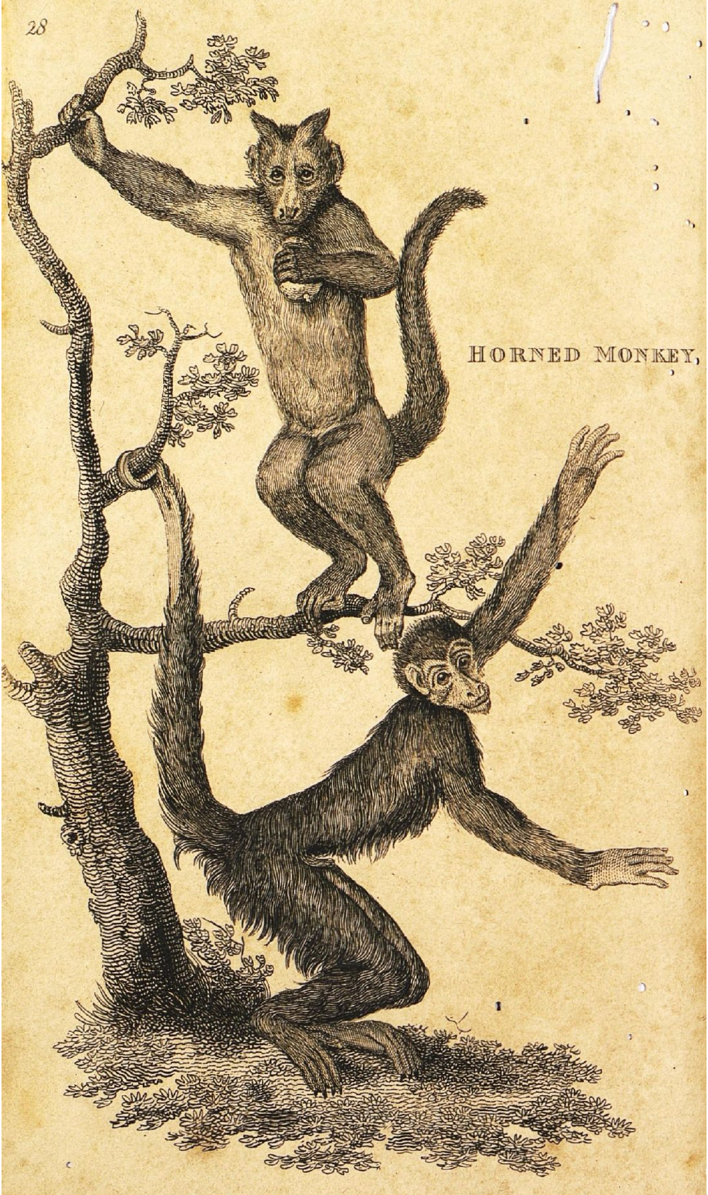
prehensile. The Royal Monkey is said to be rare in Brasil, but very common in Cayenne. On the contrary, the former species is very common in Brasil, but is not found in Guiana. Both species have the same voice and manners*.

* The following is a description given by an observer who had seen and kept these animals at Cayenne:

"The Allouates, or Howlers, inhabit the moist forests, in the neighbourhood of waters or marshes. They are commonly found in the woody islets of large flooded savannahs, and never on the mountains of the interior of Guiana. They go in small numbers, often in pairs, and sometimes singly. The cry, or rather horrible rattling scream, which they make, may well inspire terror; and seems as if the forests contained the united howlings of all its savage inhabitants together. It is commonly in the morning and evening that they make this clamour: they also repeat it in the course of the day, and sometimes in the night. The sound is so strong and varied, that one often imagines it produced by several of the animals at once, and is surprised to find only two or three, and sometimes only one, The Allouate seldom lives long in a state of captivity: it in a manner loses its voice, or at least does not exert it in the same manner as when wild. The male is larger than the female, which latter always carries her young on her back.

"Nothing is more difficult than to kill one of these animals. It is necessary to fire several times in order to succeed, and as long as the least life remains, and sometimes even after death, they remain clinging to the branches by the hands and tail. The sportsman is often chagrined at having lost his time and ammunition for such wretched game; for, in spite of the testimony of some travellers, the flesh is not at all good; it is almost always excessively tough, and is, therefore, excluded from all tables: it is merely the want of other food that can recommend it to needy inhabitants and travellers."

A figure of this species is given in the supplement to Buffon, as well as of the Preacher Monkey, but that of the latter seems not of equal authenticity with the former or red species.



HORNED MONKEY,

FOUR-FINGERED MONKEY.

1800 Feb.y 1, London Published by G. Kearsley, Fleet Street.

Heath sculp.

FOUR-FINGERED MONKEY.

Simia Paniscus. *S. caudata imberbis atra, cauda prehensili, manibus tetradactylis. Lin. Syst. Nat. p.* 37.
Long-tailed bearded black Monkey, with prehensile tail and four-fingered feet.
Coaita. *Buff.* 15. *p.* 16. *pl.* 1.
Four-fingered Monkey. *Pennant Quadr. p.* 216.

THIS animal is distinguished by the gracility of its body and limbs; its uniform black colour, except on the face, which is of a dark flesh colour, and by the want of thumbs on the fore-feet, instead of which are very small projections or appendices. It is one of the most active and lively of animals, and is, besides, of a gentle and tractable disposition in a state of confinement. It inhabits the woods of South America; associating in great multitudes; assailing such travellers as pass though their haunts with an infinite number of sportive and mischievous gambols; chattering and throwing down dry sticks, swinging by their tails from the boughs, and endeavouring to intimidate the passengers by a variety of menacing gestures. In some drawings of animals in the British Museum this species is represented with the orbits of the eyes perfectly white, and with a patch of white on each side of the tip of the nose, while the nose itself and the remainder of the face is of a dusky colour: in another figure of the same species the orbits and whole nose are of a very bright pale or whitish flesh colour.

HORNED MONKEY.

Simia Fatuellus. *S. caudata imberbis, cauda prehensili, capitis fasciculis pilorum duobus corniculorum æmulis. Lin. Syst. Nat. p. 42.*

Long-tailed beardless prehensile-tailed Monkey, with two tufts of hair on the head resembling horns.

Le Sajou cornu. *Buff. suppl. 7. p. 110. pl. 29.*

Horned Monkey. *Pennant Quadr. p. 221.*

In point of size, colours, and general appearance, this animal is considerably allied to the S. Trepida, or *Sajou* of Buffon. But the remarkable tufts of hair or horns on the head, which are very distinctly visible in all the different specimens of the animal, afford a sufficient mark of discrimination. The claws are longish and blunt. The general colour of the Horned Monkey is a subferruginous brown, lighter beneath and about the shoulders: the top of the head and outsides of the limbs of the tail blackish: the face reddish-brown and covered with hair.

FEARFUL MONKEY.

Simia Trepida. *Lin.* *S. caudata imberbis, capillitio arrecto, manibus pedibusque cæruleis, cauda prehensili villosa. Lin. Syst. Nat. p.* 39.

Long-tailed beardless Monkey, with the hair on the head upright, blueish feet, and prehensile tail.

Sajou. *Buff.* 15. *p.* 37. *pl.* 4. 5.

Bush-tailed Monkey. *Edwards, pl.* 212.

Fearful Monkey. *Pennant Quadr. p.* 217.

THIS is about the size of a small or half-grown cat: the head is round; the face short and flesh-coloured, with a little whitish down upon it: the hair on the top of the head is erect in its growth and of a deep brown or blackish colour: the general colour of the animal is a pale brown; the back, shoulders, and outsides of the limbs deeper than the other parts: the tail long, thickly covered with hair of a deep brown: the hands and feet of a dull blueish-black, and furnished with rounded nails. It is a native of Guiana. This species was first figured by Edwards. It has been known to breed in France. It is of a sprightly disposition, but is observed to be capricious in its affections when in a state of captivity, having a great fondness for some persons, and as great a hatred to others.

WEEPER MONKEY.

Simia Apella. *S. caudata imberbis cauda subprehensili, corpore fusco, pedibus nigris, natibus tectis. Lin. Syst. Nat. p. 42.?*
Long-tailed beardless Monkey, with prehensile tail, brown body, black feet, and without callosities.
Sai à gorge blanche. *Buff.* 15. *p.* 64. *pl.* 9.
Weeper Monkey. *Pennant Quadr. p.* 219.

Size of a very small cat. Face round, swarthy, flesh-coloured: general colour of the animal ferruginous brown, deepest on the back and outsides of the limbs: tail blackish*, and, as in the two former animals, well covered with hair: hands and feet dusky: nails flat and round.

CAPUCIN MONKEY.

Simia Capucina. *S. caudata imberbis fusca, cauda prehensili hirsuta, pileo artubusque nigris, natibus tectis. Lin. Syst. Nat. p.* 42.
Long-tailed beardless Monkey, with hirsute prehensile tail, black crown and limbs, and without callosities.
Sai. *Buff.* 15. *p.* 51. *pl.* 8.
Capucin Monkey. *Pennant Quadr. p.* 218.

Size of the former: face round, flat, and flesh-coloured: encircled with upright whitish hairs: the breast covered with long shaggy yellowish-

* In Schreber's figure, from the Museum Adolphi Friderici, the tail seems annulated with black and whitish; agreeing in this respect with that of the Annulated Monkey of Pennant; but no mention is made of this particular in Linnæus's description.

white hair: top of the head blackish: hair on the shoulders and upper part of the back lighter than on the lower part: tail as in the former species. Toes with crooked claws instead of flat nails.

N. B. The above three species are extremely nearly allied, and the supposed synonyms are differently applied by different authors.

SQUIRREL MONKEY.

Simia Sciurea. *S. caudata imberbis, occipite prominulo, unguibus quatuor plantarum subulatis, natibus tectis. Lin. Syst. Nat. p.* 43.

Long-tailed yellowish-grey beardless Monkey, with orange-coloured hands and feet; four of the claws on the hind feet pointed.

Saimiri. *Buff.* 15. *p.* 67. *pl.* 10.

Orange Monkey. *Pennant Quadr. p.* 220.

This, when seen in perfection, is a beautiful animal. In size it scarce exceeds a squirrel, and is of a bright gold-yellow; but the specimens commonly brought into Europe are rather of a yellowish-brown or greenish cast; with orange-yellow feet and hands. The head round; the nose blackish; orbits of the eyes flesh colour; ears hairy: under parts whitish: tail very long, with a black tip.

ANTIGUA MONKEY.

Simia Antiguensis. *S. fulvo-nigricans, subtus alba, artubus nigris, facie nigra genis barbatii, cauda prehensils fusca.*

Blackish-fulvous Monkey, white beneath, with black limbs, the face black with bearded cheeks, and brown prehensile tail.

Antigua Monkey. *Pennant Quadr. p.* 221.

With a short nose; black face: hair on each side long: back and sides orange and black, intimately mixed: belly white: outside of the legs black; inside ash-coloured: tail of a dusky ash; its length twenty inches: body eighteen. This seems a large species, and is described by Mr. Pennant from one which was brought from Antigua; but its real native place was not known: it was a lively sportive animal: the tail strongly prehensile.

NAKED-TAILED MONKEY.

Simia Morta. *S. caudata imberbis spadicea, ore fusco, cauda nuda, squamosa. Lin. Syst. Nat. p.* 43.

Long-tailed beardless brown Monkey, with dusky muzzle and naked scaly tail.

Cercopithecus americanus minor Monkie dictus. *Seba. p.* 1. 22. *t.* 33. *f.* 1.

This species (if it really exists as such) seems to have been mentioned by Linnæus on the faith of Seba, who has figured it on the thirty-third plate of the first volume of his Thesaurus; but it

is now generally imagined, as indeed Linnæus had himself surmised, that it is no other than a young or half-grown specimen of the S. Sciurea (Squirrel Monkey) before described. It is of a reddish-brown colour; with a blackish nose; and the tail is bare, as are also the under parts of the body and the limbs.

LEMUR. MACAUCO.

Generic Character.

Dentes Primores superiores quatuor: intermediis remotis.	*Front-teeth* in the upper jaw four: the intermediate ones remote.
Inferiores sex: longiores, porrecti, compressi, paralleli, approximati.	In the lower jaw six: longer, stretched forwards, compressed, parallel, approximated.
Laniarii solitarii, approximati.	*Canine-teeth* solitary, approximated.
Molares plures sublobati: antici longiores, acutiores.	*Grinders* several, sublobated: the foremost somewhat longer and sharper.

THE genus Lemur or Macauco consists of animals approaching to Monkies in the form of their feet, which, in most species, are furnished with flat nails; but differing in their manners, and void of that mischievous and petulant disposition which so much distinguishes the Monkey Tribe from other Quadrupeds.

In this, as in the former genus, we meet with some species without a tail, while others have

SLOW LEMUR.

Heath sculp.

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that part extremely long. Of the tailless species the most remarkable is the

SLOW LEMUR.

Lemur Tardigradus. *L. ecaudatus subferrugineo-cinereus, linea dorsali fusca, auriculis brevissimis.*

Tailless Lemur, of a subferruginous ash-colour, with a brown dorsal line, and very small ears.

Lemur tardigradus. *L. ecaudatus. Lin. Syst. Nat. p.* 44.

Lemur Tardigradus. Slow-paced Lemur. *Specul. Linn.* 1. *t.* 5.

Paresseux pentadactyle de Bengale. *Vosmaer, pl.* 6.

Le Loris de Bengale. *Buff. suppl.* 7. *p.* 125. *pl.* 36.

It is about the size of a small cat, measuring 16 inches in length: its colour is an elegant pale-brown or mouse-colour; the face flattish: the nose inclining to a sharpened form: the eyes yellow-brown, large, and extremely protuberant; so as to appear, in the living animal, like perfect hemispheres. They are surrounded by a circle of dark-brown, which also runs down the back of the animal. This species is very slow in its motions, and from this circumstance has actually been ranked by some naturalists among the Sloths; though in no other respect resembling them. It is a nocturnal animal, and sleeps, or at least lies motionless, during the greatest part of the day: its voice is shrill and plaintive. The figure given by Vosmaer exhibits it moving slowly on the ground, and may be considered as a very good representation; having been taken from a living specimen. The figure engraved in the Speculum Linnæanum is also an accurate representation of

the same animal in its climbing attitude, and was drawn from a living specimen in a perfectly healthy state. If there be any thing faulty in either of the above representations, it is that the eyes are scarce expressed with sufficient fulness and protuberancy, a defect which is remedied in the annexed plate of the present work, in which both these figures are shewn. In this, as in some others, the fingers and toes have rounded nails, as in most of the monkies; but the inner toe on each hind foot, next the thumb, has a sharp claw. Mr. Vosmaer's description of this animal's manners is extremely accurate, and is confirmed by the observation of several specimens, which have since been brought into Europe, two of which I have myself examined. "I received (says he) this singular animal in June 1768, and, notwithstanding its disagreeable odour, my curiosity induced me to take it into my chamber. It slept all the day to the very evening, and it being then the height of summer, it did not awake till half past eight in the evening. It was kept in a cage of an oblong square shape, with iron wires; and it constantly slept seated on its hind part, close to the wires, with its head bent forwards between the two fore feet, which were placed over its belly. In this attitude it always held itself strongly attached by the two hind feet to the iron wires of the cage; and often by one of the fore feet also; which makes me imagine that it generally sleeps on trees, holding by the branches. Its motion, when awakened, was extremely slow, and always

the same from beginning to end; drawing itself on from bar to bar; taking hold of the upper part of one bar by its fore feet, and not quitting it till it had slowly and very strongly grasped another bar with one of its hands. When it crept on the ground it moved with the same slowness, dragging one foot after the other as if paralytic; and in this motion it raised its body but very little, merely drawing itself forward in such a manner that frequently the belly was scarce a finger's breadth from the ground. It was to no purpose to drive it by passing a stick through the wires, which did not make it let go its hold: if pushed too rudely it bit the stick; and this was all the defence it made. Towards evening it awaked little by little; like one interrupted in sleep after having waked a long time. Its first care was to eat; for by day the moments were too precious to spare from repose. After having finished this task, which it performed sufficiently quick for a Sloth, it evacuated the remains of its former meal: its urine had a strong, disagreeable odour, and its fæces resembled the small pellets of sheep's dung. Its common diet, according to the account of the captain of the vessel which brought it over, was rice boiled very thick; and he had never seen it drink.

"Being persuaded that this animal would not refuse a different kind of nourishment, I gave it a sprig of lime-tree with leaves on it; but it rejected it: fruits, such as pears and cherries, were more to its taste: it willingly eat dry bread and biscuit; but would not touch them if dipped in water.

Whenever water was offered, it contented itself with smelling it, without drinking. It was passionately fond of eggs. It often made use of its hands in eating, in the manner of a squirrel. I concluded from its eating eggs, that it would also eat birds; and accordingly having given it a live sparrow, it immediately killed it with a bite, and very greedily eat the whole. Curious to know whether insects would also suit its taste, I gave it a live cockchaffer, which it took in its paw and devoured completely. I afterwards gave it a chaffinch, which it also eat with a good appetite, after which it slept the remainder of the day. I have often seen him still awake at two hours after midnight; but from half past six in the morning he was always in a profound sleep, so that his cage might be cleaned without disturbing his repose. During the day, being awaked by force in order to provoke him, he was angry, and bit the stick, but with a very slow motion, and with a reiterated cry of *ai*, *ai*, *ai*, lengthening out the *ai* each time into a plaintive, languid, and tremulous sound, in the same manner as is reported of the Sloths of America. After having been thus teized for a long time, and thoroughly awakened, he crawled two or three times round the cage, and immediately slept again."

This slowness of motion and plaintive cry made Mr. Vosmaer consider the animal as a species of Sloth; but it has no other affinity with the Sloths, nor can it be placed in the same genus. It forms a most curious contrast in this respect to that

lively species the Ring-tailed Lemur or Macauco, which exhibits the utmost vivacity in its manners and motions.

The late learned and accomplished Sir William Jones has also given a pleasing general description of this animal in the 4th volume of Asiatic Researches, and as it is always interesting to observe the manners of an animal in its native country, I shall here extract the account in the President's own words.

"The singular animal, which most of you saw alive, and of which I now lay before you a perfectly accurate figure, has been very correctly described by Linnæus; except that *sickled* would have been a juster epithet than *awled* for the *bent claws* on its hinder indices; and that the *size of a Squirrel* seems an improper, because a variable, measure: its configuration and colours are particularized with great accuracy by M. Daubenton; but the short account of the *Loris* by M. de Buffon appears unsatisfactory, and his engraved representation of it has little resemblance to nature*; so little, that, when I was endeavouring to find in his work a description of the Quadrumane, which had just been sent me from *Dacca,* I passed over the chapter on the *Loris,* and ascertained it merely by seeing, in a note, the Linnæan charac-

* Because in reality it represents the next species, or *Loris*, which at that time was confounded, by Buffon and many other writers, with the present animal; though differing much in proportion and manners.

ter of the slow-paced *Lemur**. The illustrious *French* naturalist, whom, even when we criticise a few parts of his noble work, we cannot but name with admiration, observes of the *Loris*, that, *from the proportion of its body and limbs, one would not suppose it slow in walking or leaping*, and intimates an opinion, that Seba gave this animal the epithet of *slowmoving*, from some fancied likeness to the Sloth of *America*: but though its body be remarkably long in proportion to the breadth of it, and the hinder legs, or more properly arms, much longer than those before, yet the *Loris*, in fact, walks or climbs very slowly, and is, probably, unable to leap. Neither its genus nor species, we find, are new: yet, as its temper and instincts are undescribed, and as the *Natural History* of M. Buffon, or the *System of Nature* by Linnæus, cannot always be readily procured, I have set down a few remarks on the *form*, the *manners*, the *name*, and the *country* of my little favourite, who engaged my affection while he lived, and whose memory I wish to perpetuate.

"I. This male animal had four hands, each five-fingered; palms naked; nails round, except those of the indices behind, which were long, curved, pointed; hair very thick, especially on the haunches, extremely soft, mostly dark-grey, varied with brown and a tinge of russet; darker on the

* A most convincing proof of the real merit and superiority of the Linnæan mode of description; so much and so often condemned by the Count de Buffon.

back, paler about the face and under the throat, reddish towards the rump; no tail; a dorsal stripe, broad, chesnut-coloured, narrower towards the neck; a head almost spherical; a countenance, expressive and interesting; eyes round, large, approximated, weak in the day-time, glowing and animated at night; a white vertical stripe between them; eye-lashes, black, short; ears dark, rounded, concave; great acuteness at night, both in seeing and hearing; a face, hairy, flattish; a nose pointed, not much elongated; the upper lip cleft; canine teeth, comparatively long, very sharp.

"More than this I could not observe in the living animal; and he died at a season when I could neither attend a dissection of his body, nor with propriety request my medical friends to perform such an operation in the heat of *August;* but I opened his jaw, and counted only two incisors above, and as many below, which might have been a defect in the individual; and it is mentioned simply as a fact, without any intention to censure the generic arrangement of Linnæus.

"II. In his manners he was for the most part gentle, except in the cold season, when his temper seemed wholly changed; and his creator, who made him so sensible of cold, to which he must often have been exposed even in his native forests, gave him, probably for that reason, his thick fur, which we rarely see on animals in these tropical climates: to me, who not only constantly fed him, but bathed him twice a week in water accommodated to the seasons, and whom he clearly dis-

tinguished from others, he was at all times grateful; but when I disturbed him in winter, he was usually indignant, and seemed to reproach me with the uneasiness which he felt, though no possible precautions had been omitted to keep him in a proper degree of warmth. At all times he was pleased with being stroked on the head and throat, and frequently suffered me to touch his extremely sharp teeth; but at all times his temper was quick, and, when he was unseasonably disturbed, he expressed a little resentment by an obscure murmur, like that of a squirrel, or a greater degree of displeasure by a peevish cry, especially in winter, when he was often as fierce, on being much importuned, as any beast of the woods. From half an hour after sunrise to half an hour before sunset, he slept without intermission rolled up like a hedgehog; and as soon as he awoke, he began to prepare himself for the labours of *his* approaching day, licking and dressing himself like a cat; an operation which the flexibility of his neck and limbs enabled him to perform very completely; he was then ready for a slight breakfast, after which he commonly took a short nap; but when the sun was quite set, he recovered all his vivacity. His ordinary food was the sweet fruit of this country; plantains always, and mangos during the season; but he refused peaches, and was not fond of mulberries, or even of guaiavas: milk he lapped eagerly, but was contented with plain water. In general he was not voracious, but never appeared satisfied with grass-

hoppers; and passed the whole night, while the hot season lasted, in prowling for them: when a grasshopper, or any insect, alighted within his reach, his eyes, which he fixed on his prey, glowed with uncommon fire; and having drawn himself back to spring on it with greater force, he seized the prey with both his fore-paws, but held it in one of them, while he devoured it. For other purposes, and sometimes even for that of holding his food, he used all his paws indifferently as hands, and frequently grasped with one of them the higher part of his ample cage, while his three others were severally engaged at the bottom of it; but the posture of which he seemed fondest was to cling with all four of them to the upper wires, his body being inverted; and in the evening he usually stood erect for many minutes, playing on the wires with his fingers, and rapidly moving his body from side to side, as if he had found the utility of exercise in his unnatural state of confinement. A little before day-break, when my early hours gave me frequent opportunities of observing him, he seemed to solicit my attention; and if I presented my finger to him, he licked or nibbled it with great gentleness, but eagerly took fruit, when I offered it; though he seldom ate much at his morning repast: when the *day brought back his night,* his eyes lost their lustre and strength, and he composed himself for a slumber of ten or eleven hours.

"III. The names of *Loris* and *Lemur* will, no doubt, be continued by the respective disciples

of Buffon and Linnæus; nor can I suggest any other, since the *Pandits* know little or nothing of the animal: the lower *Hindus* of this province generally call it Lajjábánor, or the Bashful Ape, and the *Musselmans*, retaining the sense of the epithet, give it the absurd appellation of a cat; but it is neither a cat nor bashful; for though a *Pandit* who saw my *Lemur* by day-light, remarked that it was lajjálu, or modest (a word which the *Hindus* apply to all *sensitive plants*), yet he only seemed bashful, while in fact he was dimsighted and drowsy; for at night, as you perceive by his figure, he had open eyes, and as much boldness as any of the *Lemures* poetical or *Linnæan*.

"IV. As to his country, the first of the species, that I saw in India, was in the district of *Tipra*, properly *Tripura*, whither it had been brought, like mine, from the *Garrow* mountains; and Dr. Anderson informs me, that it is found in the woods on the coast of *Coromandel:* another had been sent to a member of our society from one of the Eastern isles; and though the *Loris* may be also a native of Silan, yet I cannot agree with M. de Buffon, that it is the minute, sociable, and docile animal mentioned by Thevenot, which it resembles neither in size nor in disposition.

"My little friend was, on the whole, very engaging; and when he was found lifeless, in the same posture in which he would naturally have slept, I consoled myself with believing that he had died without pain, and lived with as much

pleasure as he could have enjoyed in a state of captivity."

From the above description we perceive that this animal, slow and inert as it is, is yet not quite so torpid and inactive in India, as when brought into the colder climates of Europe.

The following observations, communicated by the excellent anatomist Mr. Carlisle, cannot but be acceptable to the reader. They are accompanied by an engraving from his elegant drawings.

"The body of a Lemur tardigradus having been presented to me by a friend, for the purpose of dissection, I injected the arterial system, and upon tracing the course of the vessels, so as to make a dried preparation, an unusual appearance of distribution was exhibited by the large trunks of the subclavian and external iliac arteries.

"Immediately after the subclavian has penetrated the axilla, it is divided into twenty-three equal-sized cylinders, which surround the principal trunk of the artery, now diminished in size to an inconsiderable vessel. These cylindrical arteries accompany each other and divide with the ulnar and radial branches, being distributed in their route upon the muscles, each of which has one of these cylinders. The other branches, for example, the radial and ulnar, proceed like the arteries in general; dispersing themselves upon the skin, the membranes, joints, bones, &c. in an arborescent form. The iliac artery divides upon the margin of the pelvis into upwards of twenty equal-sized cylinders, surrounding the main trunk, as described in the axillary artery:

these vessels are also finally distributed as in the upper extremity; the cylinders wholly upon the muscles, and the arborescent branches on all the other parts. The carotid arteries do not divide into equal-sized cylinders, but are distributed as in the generality of animals.

"It would be of some importance in physiology to ascertain whether the other slow-moving Quadrupeds have any peculiar arrangement of the arteries of their limbs. This solitary fact is hardly sufficient for the foundation of any theoretical explanation of the slow movement of these muscles: if, however, it should be corroborated by similar circumstances in other animals, a new light may be thrown upon muscular motion by tracing a connection between the kind of action produced in a muscle, and the condition of its vascularity or supply of blood."

Fig. 1. The arm and shoulder of the lemur tardigradus.
- a. The subclavian artery, lying upon the subscapularis muscle.
- b. The division of the artery into equal-sized cylinders.
- c. The ulnar artery proceeding to divide in the ufual manner.

Fig. 2. The trunk, from below the diaphragm, of the lemur tardigradus, one of the limbs being left unfinished, as it appeared unnecessary to reprefent them both.
- a. The diaphragm.
- b. The descending aorta.
- c. c. The iliac arteries.
- d. The trunk of the inguinal artery, situated among the cylinders.
- e. The femoral artery under similar circumstances.

Fig 2.

Fig. 1.

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Heath sculp.

LORIS.

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LORIS.

Lemur Loris. *L. ecaudatus subferrugineo-cinereus, artubus gracillimis, auriculis magnis.*

Tailless Lemur of a subferruginous ash-colour, with extremely slender limbs and large ears.

Animal cynocephalum ceilonicum. *Seb. mus.* 1. *p.* 55. *t.* 35.

Le Loris. *Buff.* 13. *pl.* 30.

Loris Macauco. *Pennant Quadr. p.* 228.

By a singular fatality it has happened that this species, though perfectly distinct from the former, and in manners totally different, has yet been confounded with it by many writers on Natural History. It is considerably smaller than the former; its body is slender; its limbs remarkably thin; and it is, like the former, perfectly destitute of a tail; and this circumstance seems to have caused the general mistake among naturalists. It is said, by those who have contemplated it in its native climate, to be a perfect contrast to the former in its motions; being possessed of great agility and liveliness. In colour it nearly resembles the former species, but is paler, and more inclining to a yellow tinge. It is very elegantly figured in Seba's Thesaurus. At first view of the figure one would be apt to imagine that it had been taken from a dried specimen, in which the limbs had shrunk from their former or natural dimensions; but the several specimens preserved in Museums, in whatever manner prepared, confirm the truth of the representation; the same

gracility of limbs and body being in all equally conspicuous.

It has been observed, in a note relative to the former species, that this is the animal figured in Buffon; and it is farther remarkable, that, by an aukward mismanagement relative to the posture, it is made to appear a short instead of long-bodied animal.

The figure in the present work is from a beautiful and perfect specimen in the Leverian Museum; but which, representing the animal in a ringent state, exhibits perhaps an air of fierceness not perfectly according with its character.

INDRI.

Lemur Indri. *L. ecaudatus niger, subtus griseus, facie natibusque albidis.*

Tailless black Lemur, greyish beneath, with the face and ſpace round the tail whitish.

Indri. *Sonnerat voy.* 2. *pl.* 142. *pl.* 8.

Lemur Indri. *L. ecaudatus niger. Lin. Syst. Nat. Gmel. p.* 42.

Indri Macauco. *Pennant Quadr.* 1. *p.* 228.

THIS is a very large species. It is entirely of a black-colour, except on the face, which is greyish: a greyish cast also prevails towards the lower part of the abdomen, and the rump is white. The face is of a lengthened or dog-like form: the ears shortish and slightly tufted: the hair or fur is silky and thick, and in some parts of a curly or crisped appearance: it is the largest animal of

INDRI

this genus, and is said by Mons. Sonnerat, its first describer, to be three feet and a half high. It is said to be a gentle and docile animal, and to be trained, when taken young, for the chace, in the manner of a dog. Its voice resembles the crying of an infant. It is a native of Madagascar, where it is known by the name of Indri, which is said to signify *the man of the wood.* The nails in this species are flat, but pointed at the ends; and there is no appearance of a tail. The front or cutting teeth in the upper jaw are four, according to Mons. Geoffroy (Magaz. Encyclopédique), not two, as mentioned by Mr. Sonnerat.

POTTO.

Lemur Potto. *L. caudatus subferrugineus, cauda unicolore. Lin. Syst. Nat. Gmel. p.* 42.

Tailed subferruginous Lemur, with tail of the same colour.

Potto. *Bosman Guin.* 2. *p.* 30. *f.* 4.

This seems at present an obscure species; known only from the description and figure in Bosman's account of Guinea. This description states that the animal is called Potto by the natives, but by the Europeans Sloth, from the extreme slowness of its motions. He then proceeds to give the usual description of the manners attributed to the real Sloth, such as its scarce being able to walk ten paces in a day; its eating up all the fruit and leaves of a tree, and thus becoming

fat, after which it grows lean, and is in danger of starving before it can climb a second tree, &c. &c. All this, however, he does not pretend to avouch from his own knowledge, but tells us, that the negroes believe it. He assures us, however, that this animal is inconceivably ugly, and that when old it is covered with reddish flocky hair like wool; though it appears brown and smoothish when young. He does not mention its size. The figure bears some resemblance to the Lemur tardigradus, but is represented with a tail of some length.

WOOLLY.

Lemur Mongoz. *L. caudatus griseo-fuscus, cauda unicolore.*
Long-tailed grey-brown Lemur, with tail of a similar colour.
Lemur Mongoz. *L. caudatus griseus, cauda unicolore. Lin. Syst. Nat. p.* 44.
Mongous. *Buff.* 13. *p.* 198. *pl.* 26. *and suppl.* 7. *p.* 118. *pl.* 32.
Mongooz. *Edw. pl.* 216.
Woolly Macauco. *Pennant Quadr. Buff.* 1. *p.* 229.

This species is about the size of a cat, and is of an uniform dusky-brown-colour, with the breast and belly white or whitish. The tail is very long and thickly covered with fur: the whole animal is also covered with thick, soft, wavy or curling fur. The eyes are of a bright orange-colour; and are surrounded by a circle of black, which descends to some little distance down the nose; the remainder, with the cheeks, being white: the

WOOLY LEMUR.

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hands and feet are naked and dusky; the nails flat, except on the interior toe of the hind feet next the thumb, which has a sharp claw. This species varies sometimes a little in colour; the ends of the limbs and the paws being of a dull orange-colour, or yellow, and sometimes white, with the face entirely brown. It is a native of Madagascar and some other Indian islands; and lives principally on fruit. When in a state of captivity it is commonly gentle and sportive. That described by the Count de Buffon seems to have been of a different disposition; but individuals of all animals must be supposed to differ from each other with respect to temper and manners, according to circumstances. The individual just mentioned uttered almost constantly a low grunting noise; and when tired of being alone, croaked in the manner of a frog, so loud as to be heard to a great distance: its tongue was rough, like that of a cat; and the Count de Buffon adds, that, when permitted, it would lick a person's hand till the skin was inflamed. This species appears also to vary sometimes in size. The larger variety is described and figured in the Count de Cepede's additions to Buffon's History of Quadrupeds, under the title of *Le grand Mongous;* and seems to differ in no other respect than size from the animal in its usual state.

RUFFED LEMUR.

Lemur Macaco. *L. caudatus niger, collari barbato. Lin. Syst. Nat. p.* 44.
Tailed black Lemur, with the neck bearded in the manner of a ruff.
Black Maucauco. *Edw. pl.* 217.
Vari. *Buff.* 13. *p.* 174. *pl.* 17.
Ruffed Macauco. *Pennant Quadr.* 1. *p.* 231.

THIS is the species described by the Count de Buffon under the name of the Vari, its colours often consisting of a patched distribution of black and white; though its real or natural colour is supposed to be entirely black. In size it exceeds the Mongoz, or Brown Lemur. It is said to be a fierce and almost untameable animal. It inhabits the woods of Madagascar and some of the Indian islands; and is said to exert a voice so loud and powerful as to strike astonishment into those who hear it, resembling, in this respect, the howling Monkey or S. Belzebub, which fills the woods of Brasil and Guiana with its dreadful cries. When in a state of captivity, however, it seems to become as gentle as some others of this genus. That described and figured by Edwards was an example of this, and is expressly said to have been "a very sociable, gentle, harmless-natured animal, not having the cunning, mischievousness, or malice of the Monkey kind."

The astonishing strength of voice in this animal, depends, according to the Count de Buffon, on the peculiar structure of the larynx, which

LONG-FINGERED LEMUR.

FLOCKY LEMUR.

1800 Feby. 1 London Publish'd by G Kearsley Fleet Street. Heath sculp.

widens, immediately after its divarication, into a large cavity before entering the lungs.

FLOCKY LEMUR.

Lemur Laniger. *L. caudatus ex flavo rufescente testaceus subtus albus, cauda ex rufescente fulva unicolore. Lin. Syst. Nat. Gmel. p.* 44.

Tailed pale-tawny Lemur, white beneath, with ferruginous tail.

Maquis à bourres. *Sonner. voy.* 2. *p.* 142. *pl.* 89.

This is described by Sonnerat as a large species; measuring a foot and nine inches from nose to tail; the tail being also nine inches. Its colour is a pale yellowish-ferruginous on the upper parts, and white beneath: the tail bright ferruginous. The fur is extremely soft and crisped, and of a deeper colour on the region of the loins: the face is black: the ears small: the eyes large, and of a greenish-grey: in the upper jaw, are two fore-teeth: in the lower jaw four: the feet have five fingers, which have long claws, except the thumbs, which have rounded nails. Mr. Pennant, in the last edition of his History of Quadrupeds, seems to think this animal no other than the L. Mongoz, or Woolly Macauco, and complains that Sonnerat's figure is very inaccurate; but if Sonnerat's description be just, the species must certainly be a different one from the L. Mongoz. Two smaller varieties of the Flocky

Macauco are described and figured in the supplement to Buffon, viz.

Le Petit Makis Gris. *Buff. suppl. p. 121. pl. 34.*

This pretty little animal, says the Count de Cepede, was brought from Madagascar, by Mons. Sonnerat. It has the whole body, except the face, feet, and hands, covered with a greyish woolly fur, thick and soft to the touch. Its tail is very long and covered with fur similar to that of the body. It is much allied to the Macauco, both in its form and attitudes, as well as in the nimbleness of its motions; but the Macauco stands higher on its legs. In both the fore legs are shorter than the hind. The colour of this little Lemur is, as it were, marbled with pale tawny: the fur being mouse-grey at the roots, and pale tawny at the extremities. The fur on the upper part of the body is six lines long, and four on the under part. The whole under part is white from the lower jaw; but the white is a little mingled with yellowish and greyish on the belly and under parts of the limbs. The head is very large in front, and the snout is very pointed, which gives a great sharpness to the physiognomy of the animal: the forehead is straight; the eyes round and full: the ears are nine lines high, and seven broad: they differ from those of other Macaucos, which are large, and, as it were, flattened at the ends. Those of this little species are large at the base, and rounded in outline: they are co-

vered and edged with ash-coloured hairs. The circumference of the eyes, the ears, and the sides of the cheeks, are of a clear ash-colour, as well as the fore parts of the arms and legs. The length of this animal, measured in a straight line, is ten inches and three lines; but if measured according to the curvature of the body, one foot and two lines: the length of the head, from the tip of the nose to the hind part, is two inches and five lines. The interior toe is furnished with a sharp crooked claw: the rest with nails. The tail is fifteen inches long, of an uniform thickness throughout its whole length, and of the same colour with the body; the tip is rather deeper than the rest, and the fur on this part measures seven lines. It must be considered, I think, in no other light than as a variety of the L. laniger.

Autre Espece de Maki. *Buff. suppl. p.* 123. *t.* 35.

This, which is also described by Cepede, seems greatly allied to the former; from which it differs, on a general view, principally in the tints and distributions of its colours. Its fur resembles that of the former, but is more thick, woolly, crisp, and tufted, as it were, causing the animal to appear thicker in proportion. The head is large, and the snout not so long in proportion as in the Vari, the Mongoz, and the Macauco. The eyes are very large, and the eyelids bordered with blackish. The forehead is large, and the ears short and hid in the fur. The fore legs short in comparison with the hinder. The tip of the nose

is covered by a large black patch, running up into a point on the nose, and covering part of the upper jaw. The length of the animal, from the tip of the nose to the beginning of the tail, is eleven inches and six lines: the tail is ten inches and ten lines, and is of an uniform thickness. The general colour of this animal is brown and ash-tawny in different shades; the hair being brown with tawny tips. The under parts are of a dirty white tinged with tawny. The brown predominates on the head, the back, and upper parts of the limbs; and the ash-tawny prevails on the sides of the body and limbs: the tawny tinge is deepest round the ears. All the part of the back nearest the tail is tinged with tawny, which becomes orange throughout the whole length of the tail. The hands and feet are covered with ash-tawny hairs; but the fingers and nails are black. The thumb or great toe of the hind feet is large, and has a thin round nail; and the second toe is connected to it by a blackish membrane.

TARSIER.

Heath sculp.

RING-TAILED LEMUR

RING-TAILED LEMUR.

Lemur Catta. *L. caudatus, cauda albo nigroque annulata. Lin. Syst. Nat. p.* 45.

Long-tailed Lemur, with the tail annulated with black and white.

Mococo. *Buff.* 13. *p.* 174. *pl.* 22.

The Maucauco. *Edw. pl.* 197.

Ring-tailed Lemur. *Museum Leverianum. No.* 6. *p.* 43. *pl.* 11.

Ring-tailed Macauco. *Pennant Quadr.* 1. *p.* 230.

This is by far the most beautiful animal of the genus. Its size is that of a small cat, but of a more slender shape: its colour is a pale greyish-brown, with a slight cast of ferruginous on the back and outsides of the limbs: the under parts of the body are whitish. The nose black: the eyes bright orange-hazel, surrounded by a distinct circle of black: the hands and feet black; the fingers and toes furnished with round nails. The tail is very long, and beautifully marked throughout the whole length with distinct circles of black and white: the fur on the whole animal, but more particularly on the tail, is very fine, soft, and suberect in its growth, so as to give a greater degree of thickness to the tail than if it grew in a more oblique direction. The manners of this species are gentle and lively: it possesses the highest degree of activity, and its motions have an ease and elegance surpassing almost every other quadruped. In their native state these animals live in society, and are seen in troops of thirty or forty together in the woods, where they

feed principally on fruits. In a state of confinement they will not only eat fruits of different kinds, but likewise animal food; and in this respect the present species, the Mongoz, and the Vari agree; all feeding nearly in the same manner. The Macauco delights much in sunshine, and in sitting before the fire: its general attitude at such times is similar to that assumed by a squirrel when feeding, sitting upright and often extending forwards its spread hands.

HEART-MARKED LEMUR.

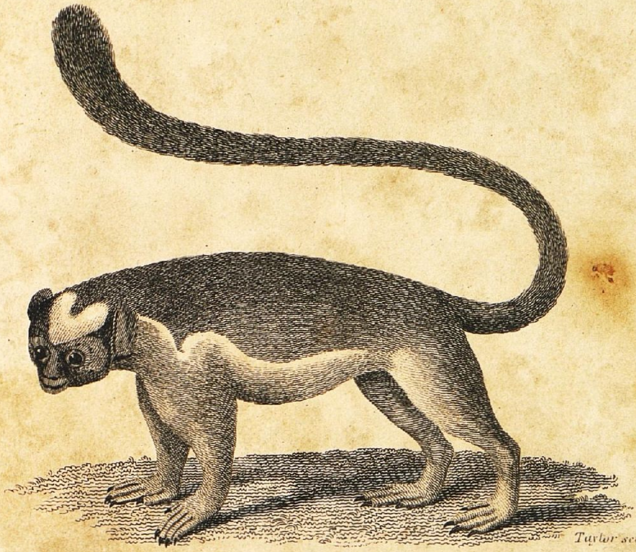
Lemur Bicolor. *L. caudatus, supra ex atro griseus, subtus sordide albus, macula frontali cordata sordide alba. Lin Syst. Nat. Gmel. p.* 44.

Long-tailed blackish Lemur, white beneath, with a white heart-shaped spot on the forehead.

Lemur Bicolor. *Miller Cimel. Phys. p.* 64. *pl.* 32.

Heart-marked Maucauco. *Pennant Quadr. append. p.* 223. *pl.* 106.

THIS species has the face, upper part of the neck and back, hind part of the thighs, and the tail, black: the under part of the neck and body, and the limbs, white. On the forehead is a large heart-shaped spot pointing downwards. The tail is considerably longer than the body, and thickens gradually towards the tip. The feet are furnished on all the toes with strong sharp claws of a black colour; in which particular it differs from other animals of this genus. It is supposed to be a native of South America.



Taylor sculp.

HEART-MARKED LEMUR.

1800. Jan.y 1 London Publish'd by G. Kearsley Fleet Street.

TARSIER.

Lemur Tarsier. *L. caudatus cinereus, cauda gracili subnuda apice subfloccosa, pedibus posterioribus longissimis.*

Long-tailed ash-coloured Lemur, with slender and almost naked tail, tufted at the end, and very long hind feet.

Tarsier. *Buff.* 13. *p.* 87. *pl.* 9.

Didelphis Macrotarsus. *Lin. Syst. Nat. Gmel. p.* 109.

Tarsier Maucauco. *Pennant Quadr.* 1. *p.* 231.

THIS animal is distinguished by the great length of its hind legs. Its general length from the nose to the tail is almost six inches; and from the nose to the hind toes eleven inches and a half: the tail nine inches and a half. The face is sharp or pointed: the eyes very large and full: the ears upright, broad, naked, and rounded. Between the ears on the top of the head is a tuft of long hairs: several long hairs also proceed from each side of the upper chap: in each jaw, according to the observation of Mr. Pennant, are two cutting, and two canine teeth, forming an exception in this respect to the rest of the genus. The body is of a slender form; the feet are slender and the claws pointed: the thumbs are large and rounded. The legs and feet are but thinly covered with hair: the tail also is thinly covered, except towards the end, where it is terminated by a tuft. The colour of this species is grey-brown or mouse-colour, paler beneath. It is a native of Amboina and some other East-Indian Islands.

MURINE LEMUR.

Lemur Murinus. *L. caudatus cinereus, cauda ferruginea. Lin. Syst. Nat. Gmel. p.* 44.
Long-tailed ash-coloured Lemur, with ferruginous tail.
Little Lemur. *Brown Illustr. Zool. p.* 108. *pl.* 44.
Lemur Murinus. *Cimelia Physica. p.* 25. *pl.* 13.
Murine Maucauco. *Pennant Quadr.* 1. *p.* 232.
Little Maucauco. *Pennant Quadr.* 1. *p.* 233.
Rat de Madagascar. *Buff. suppl.* 3. *p.* 149. *pl.* 20.

This species is extremely well figured in Brown's Illustrations of Zoology, from a living specimen which was kept some time in England. Its size was somewhat less than the black rat; and its colour is an elegant pale cinereous or grey on the upper parts, and white beneath: the eyes are encircled by a zone of a deeper colour: the ears are large, naked, rounded, and thin: the eyes very large and full: the tail is hairy, of the length of the body, and prehensile, or capable of coiling at pleasure round any object, as in some of the small monkies: the toes are rounded at the ends, and have also rounded nails, but those on the first toe on each hind foot are long and sharp. This, as Mr. Pennant observes, seems to be the same animal with that figured in Buffon, under the title of Rat de Madagascar; and which is supposed to live in the palm-trees, and feed on fruits: it eats, holding its food in its fore feet, like a squirrel: has a weak cry, and when sleeping rolls itself up. This also is the animal which is suspected to have given rise to the doubtful species of Monkey, called by Linnæus

White sculp.

MURINE LEMUR.

1800 Jan.y 1 London, Publish'd by G. Kearsley, Fleet Street.

Simia Syrichta: the figures of Camelli, which we have added to the description of that animal, appearing to possess the character of a Lemur rather than of a genuine Simia; but this must be considered as a matter of doubtful speculation. It should be added, that the Rat de Madagascar of Buffon is said to have been a fierce untameable little animal; and that it was kept some years in France, generally residing in a warm room, and feeding on almonds, &c.

Mr. Miller's Figure in the Cimelia Physica is still smaller, not exceeding a half-grown rat in size: it is an animal of great beauty: the general colour is a most elegant pale-grey: the insides of the ears and orbits of the eyes flesh-coloured: the eyes bright hazel, and the tail bright ferruginous. The whole animal is well covered with fur. The tail is thickly furred, and still more so towards the extremity. When sleeping it rolls itself up, as expressed in the plate.

Mr. Pennant, in a letter to myself, some time before the publication of the last edition of his History of Quadrupeds, expresses a doubt whether this animal may not be the same with the preceding, or a sexual difference; since it seems to agree in almost all particulars except the colour of the tail; and, on farther consideration, I am inclined to think that this circumstance is, in reality, no objection against the identity of the two animals, the tail in that figured in Brown's Illustrations of Zoology being described and represented as of a pale subferruginous-brown.

WHITISH LEMUR.

Lemur Calago. *L. caudatus albidus, subtus griseus, cauda ferruginea.*

Long-tailed whitish Lemur, grey beneath, with ferruginous tail.

Calago. *Geoffr. Magaz. Encyclop.* 1. *p.* 41. *pl.* 1.

This is one of the smaller species, measuring about six or seven inches from the nose to the tail, which is about eight inches long. Its colour is a yellowish-white above, and ash-coloured beneath; but the tail is ferruginous, and the head almost entirely grey. It is to be observed also, that the hairs on the body are grey for the greatest part of their length, the tips alone being white; thus causing the white or whitish-yellow tinge before mentioned. The ears are thin, upright, rounded at the tips, and very large. The hind legs are much longer than before: the index or first finger of the hind feet is furnished, as in most others of this genus, with a sharp claw, while all the rest have rounded nails. The Galago is an animal of a mild disposition: it is almost always found on trees, and lives on insects, which it easily catches with its fore feet, and devours with singular readiness. It brings forth its young in the hollows of trees, where it prepares its nest, which it lines with herbage. The negroes of Galam hunt these animals for the purpose of food. We owe the first knowledge of this species to Mons. Adanson, who discovered it in Senegal.

LONG-FINGERED LEMUR.

Lemur Psilodactylus. *L. cinereo-ferrugineus, cauda villosissima, digito palmarum medio longissimo nudo.*

Ash-ferruginous Lemur, with extremely villose tail, and the middle finger of the fore feet very long and naked.

Aye Aye. *Sonnerat voy. aux Indes, or. 2. p. 142. pl. 88.*
Buff. suppl. 7. p. 268. pl. 68.

Aye Aye Squirrel. *Pennant Quadr. 2. p. 142.*

Lemur Psilodactylus. *Schreber suppl.*

This highly singular species has so much the general appearance of a Squirrel, that it has been referred to that genus both by Mr. Pennant in the last edition of his History of Quadrupeds, and by Gmelin in his enlarged edition of the Systema Naturæ of Linnæus. The account, however, given by Mons. Sonnerat, its first describer, seems to prove it a species of Lemur. Mr. Sonnerat observes, that it seems allied to the Macaucos, the Squirrels, and the Monkies. It measures from fourteen to eighteen inches from the nose to the tail, which is about the same length. The general colour of the animal is a pale ferruginous-brown, mixed with black and grey: on the head, round the eyes, and on the upper parts of the body, the ferruginous-brown prevails, with a blackish cast on the back and limbs: the tail is entirely black: the sides of the head, the neck, the lower jaw, and the belly, are greyish: there are also a kind of woolly hairs of this colour, and of two or three inches in length, scattered over the whole body: the thighs and legs have a red-

dish cast: the black prevails on the feet, which are covered with short hairs of that colour: the head is shaped like that of a Squirrel; and there are two cutting teeth in front of each jaw: the ears are large, round, and naked, resembling those of a bat, and of a black colour. The feet are long, and somewhat resemble those of the Tarsier: the thumbs or interior toes of the hind feet are short, and furnished with flat, round nails, as in the Macaucos; but the principal character of the animal consists in the extraordinary structure of the fore feet, which have the two middle toes of an uncommon length, most extremely thin, and perfectly naked, except at their base: all the claws on the fore feet are sharp and crooked. It is a timid animal; and can scarce see distinctly by day, and its eyes, which are of an ochre colour, resemble those of an owl. It is extremely slow, and of a mild disposition: those which were kept by Mr. Sonnerat slept almost continually, and were scarce to be awakened but by shaking two or three times: they lived about two months, during which time they had no other nourishment but boiled rice, which they took up with their long fore toes, in the manner that the Chinese use their eating-sticks. During the whole time that these animals were kept by Mr. Sonnerat, he never observed them to set up the tail in the manner of a Squirrel, but always to carry it trailing at length. The figure in the supplemental volume of Buffon is wrong in this respect; as well as in not ex-

pressing with sufficient precision the extreme thinness of the two middle toes.

This species is a native of Madagascar, where it inhabits woods: it is extremely rare, and is supposed to feed on fruits, insects, &c. it is fond of warmth, and has the same slow motion as the Lemur tardigradus. Its native name is *Aye Aye,* which is said to be taken from its natural voice or cry, which resembles a feeble scream.

A NEW arrangement of the animals of the Linnæan genus Lemur is proposed by Mons. Geoffroy, who distributes them into five distinct genera, in the following manner:

I.

INDRI.

Four upper cutting-teeth, standing distant in pairs. Four lower ones horizontal.

1. *Indri brevicaudatus.* *Short-tailed Indri.* Blackish Indri, with very short tail.

   Indri *Sonn.* Lemur indri. *Gmel. Syst. Nat.*

2. *Indri longicaudatus.* *Long-tailed Indri.* Tawny Indri, with very long tail.

   Le Maki à bourres. *Sonn.*
   Lemur laniger. *Gmel. Syst. Nat.*
   Le Maki fauve. *Buff. suppl. 7. pl.* 35.

II.

MAKI. LEMUR.

Four upper cutting-teeth, standing distant in pairs. Six lower ones, directed obliquely forwards. Long tail.

1. *Le Maki Mococo.* *Lemur Catta.* With tail annulated with black and white.
   L. Catta. *Lin.*
   Mococo. *Buff.*

2. *Le Maki Mongous.* *L. Mongoz.* Grey M. white beneath, with a black circle round the eyes, and a tail of the ſame colour with the body.
   A. With grey hands.
   Edw. Glanures. 1. *p.* 12. *pl.* 216.
   A. With tawny hands.
   Buff. 13. *p.* 174. *pl.* 26.

3. *Le Maki Brun.* *L fulvus.* Brown M. grey beneath, with black head.
   A. With tawny hands.
   Buff. suppl. 7. *pl.* 33.
   B. With brown hands. An unpublished variety, in the possession of Mons. Marechal. This is probably the kind named Bugee by Petiver.

4. *Le Maki Noir.* *L. Niger.* Entirely black, with long hair round the neck.
   Edw. Glan. pl. 17.

5. *Le Maki Vari.* *L. Macaco.* Variegated with large regular patches of black and white, with long hair round the neck.
   A. Le vari commun.
   Buff. 13.
   B. Le vari à ceinture.
   This is a variety differing only from that described by Buffon in the distribution of its colours; having the head, body, and tail, black, with a white circle round the neck: the fore part of the legs, back of the thighs, and a transverse band on the middle of the back, are also milk-white.

6. *Le Maki à front blanc.* *L. albifrons.* Brown, with the top of the head and the cheeks white.

A new species, which I have observed to be constant in form and colours in three specimens which I have examined: it is, perhaps, to this that the Lemur bicolor, *Gmel. Syst. Nat.* belongs.

7. *Le Maki gris.* *L. griseus.* Grey above, paler beneath, with short muzzle.

Le Griset. *Buff. suppl.* 7.

Lemur murinus. *Gmel.?*

8. *Le Maki nain.* *L. Pusillus.* Tawny ash-coloured, with the lower canine teeth and first pair of grinders pointing forwards.

Rat de Madagascar. *Buff. suppl.* 3. *pl.* 20.

All the species of Indri and Lemur are natives of Madagascar.

III.

LORIS.

Four upper cutting-teeth standing distant in pairs: six lower ones, directed obliquely forwards: tail none, or next to none.

1. *Le Loris grele.* *Loris gracilis.* No tail; upper cutting-teeth equal.

Loris. *Buff.*

Native of the East Indies.

2. *Le Loris paresseux.* *Loris tardigradus.* Tail extremely short: lateral cutting-teeth shorter than the rest.

Lemur tardigradus. *Lin.*

Paresseux de Bengale. *Vosm.*

Native of Bengal, Ceylon, &c.

IV.

GALAGO.

Two upper cutting-teeth very remote: six lower ones directed obliquely forwards: the four intermediate ones united by pairs.

1. *Le Galago du Senegal.* *Galago Senegalensis.*

V.

TARSIER.

Four upper cutting-teeth placed near together: lateral ones very small; two lower vertical.

1. *Le Tarsier de Pallas.* *Tarsius Pallasii.* With obtuse cutting-teeth; the superior middle ones rather short.
   Lemur Spectrum. *Pall. glires.*

2. *Le Tarsier de Daubenton.* *Tarsius Daubentonii.* With weak cutting-teeth; the upper middle ones very long.
   Tarsier. *Daub. Buff.* 13.

   The Tarsiers inhabit the remotest isles of the Indian ocean, as Macassar, Amboina, &c.

From the above distribution, it should seem that Mons. Geoffroy has considered some animals of this genus as distinct species, which are, perhaps, rather varieties. It may also be added, that if this exact observation of the teeth were attended to, the genus Vespertilio might with equal propriety be distributed into several distinct genera; but it may be doubted whether the study of Natural History would be facilitated by such an arrangement.

GALEOPITHECUS. COLUGO.

Generic Character.

Dentes Primores superiores nulli.	*Front-teeth* in the upper jaw none.
Inferiores sex, lati, breviusculi, distantes, pectinati.	In the lower six, short, broad, distant, pectinated.
Laniarii brevissimi, trianguli, lati, acuti, serrati.	*Canine-teeth* very short, triangular, broad, sharp, serrated.
Molares quatuor, truncati, prominentiis conicis muricati.	*Grinders* four, truncated, and muricated with conical protuberances.
Pellis volatica corpus caudam artusque ambiens.	*Flying-skin* surrounding the body, limbs, and tail.

THIS singular animal, which, from its size and extraordinary conformation, claims a conspicuous place among the productions of Nature, has but lately been examined with the degree of exactness necessary for ascertaining clearly its generic characters. It is to Dr. Pallas that we owe the exact knowledge of these particulars, and an accurate description, accompanied by good figures, may be found in the Transactions of the Academy of Petersburg, for the year 1780.

GALEOPITHECUS VOLANS.—FLYING COLUGO.

Galeopithecus Volans.
Lemur Volans. *L. caudatus, membrana ambiente volitans. Lin. Syst. Nat. p.* 45.
Vespertilio admirabilis. *Bontius Jova.* 68. *t.* 69.
Felis volans ternatea. *Seba mus.* 1. *p.* 93. *t.* 58. *f.* 2, 3.
Cato-Simius volans Camelli. *Petiv. gaz.* 14. *t.* 9. *f.* 8.
Galeopithecus. *Pallas act. acad. petrop.* 1780. *p.* 280. *t.* 7, 8.
Flying Macauco. *Pennant Quadr.* 1. *p.* 234. *pl.* 50.

The Colugo is a native of the Molucca and Philippine islands, where it is said to frequent woody places, and to feed principally on fruits. It almost constantly resides on trees, and makes use of its membranes in the same manner as the flying squirrel. In descending from the top of a tree, it spreads its membranes, and balances itself to the place it aims at in a gentle manner; but in ascending it uses a leaping pace. It has two young, which are said to adhere to its breasts by the mouth and claws. The whole length of the animal is about three feet: the breadth, when expanded, nearly the same: the tail is slender and about a span long. The membrane, or expansile skin, by which it is enabled to fly, is continued, on each side, from the neck to the fore feet; thence to the hind feet; and again to the tip of the tail: it is not naked, like the skin of a bat's wing, but covered with fur, in the same manner as the body: the inner or lower side, however, appears membranaceous, and is marked by nume-

FLYING COLUGO.

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Heath sculp.

rous veins and fibres dispersed through it. The whole upper side of the animal is generally of a deep ash-colour, most so in those which are full-grown, and blacker in the younger or less advanced specimens: the back also, in the full-grown animals, is crossed transversly with blackish lines; towards the edges, is commonly a tinge of yellowish, and the whole under side, both of the body and membrane, is of a yellowish colour. The head is long: the mouth rather small; the tongue, according to Dr. Pallas, fleshy, broad, rounded, attenuated on the edges, and ciliated with papillæ, as in the Opossums: it is also slightly beset with papillæ on its surface. There are no fore-teeth in the upper jaw, but in the lower are six, which are short, broad, and pretty deeply pectinated, so as to resemble little combs on their upper part: the canine teeth, or at least those which Dr. Pallas considers as such, are shaped somewhat like the petrifactions known by the name of *glossopetræ*, being triangular, very broad at their base, very short, sharp-pointed, and serrated: the grinders, or molares, which are generally four, both above and below, are of an abrupt or truncated form, and roughened with conical protuberances. The ears are small, round, membranaceous, and marked internally by numerous semicircular transverse streaks, as in a bat. The legs are clothed with a soft yellow down: there are five toes on each foot, united by a common membrane, and terminating in large, thin, broad, very sharp crooked claws.

This animal is said to be called by the Indians *Caguang*, *Colugo*, and *Gigua*. It was first described by Bontius, in his History of Java. He informs us, that it is found in Guzarat, in India; that it is a gregarious animal, and flies principally in the evening; and that its body is of the size of a cat, and is covered above with a soft grey fur, like that of a rabbit; that the head is oblong, the ears small and round, and that it has five strong claws on each foot, by which it holds firmly whatever it seizes, and that it feeds chiefly on fruits. Camelli, in his enumeration of the animals of the Philippine isles, published by Petiver in the Philosophical Transactions, describes it as about the size of a cat, shaped like a monkey, but more slender, and of the length of about three spans from head to tail; but adds, that in some parts it arrives at a far larger size, so as to equal a Chinese umbrella in expanse. He describes the colour on the upper parts as dusky, and elegantly variegated with whitish streaks on the back, running beyond the body over the flying membrane: the face he compares to that of a monkey, and the manner of flight to that of a flying squirrel: Camelli adds, that the young adhere to the teats of the parent by their mouth and claws; but it is remarkable, that in his manuscript on this subject, now preserved in the British Museum, he expressly asserts that the female is furnished with two sacs or pouches on her belly, in which she carries her young while sucking. "Fæmella ad

ventrem binos habet quasi sacculos, in quibus catuli ubera sugientes hærent." Camell. Mss. Mus. Brit.

Linnæus, judging of this animal's place in systematic arrangement, from the figures and descriptions of authors, but not having had an opportunity of examining its generic characters himself, placed it in the genus Lemur, to which he supposed it most allied; but was careful, at the same time, to observe, that, as its teeth had not been examined, its real genus was, of course, not determinable. By the Count de Buffon it was, with unpardonable negligence, entirely omitted; nor was it till Dr. Pallas's description in the Petersburgh Transactions appeared, that its genuine characters were ascertained.

In the publication entitled *Magazin Encyclopédique*, we meet with an account of the teeth of this animal, by Mons. Geoffroy, who appears to have examined with peculiar accuracy the specimens belonging to the Museum of the Prince of Orange.

Mr. Geoffroy observes, that in the form and disposition of the teeth it differs not only from the Lemures, but from all other quadrupeds. He is also of opinion, that the foremost of what Dr. Pallas considers as canine, should, in reality, be considered as cutting teeth; since they are inserted into the incisive or intermaxillary bone: all the teeth, taken together, are of so anomalous a cast as to make it difficult to determine the intention of Nature in their formation; but Mr.

Geoffroy is inclined to think them calculated for feeding on insects, though the animal is usually said to live on fruits.

With respect to other particulars of this animal, we are informed by Mr. Geoffroy that the coecum, in a specimen dissected by Mons. Cuivier, was extremely large and voluminous; whereas, in the Bat, to which the Colugo may be allowed to bear some affinity, that part is wanting. Dr. Pallas has observed, that the liver is divided into two lobes, of which the right is entire and broader than the left, which is by far the longest, extended downwards, and divided into three segments.

There are, according to Mons. Geoffroy, two varieties (perhaps sexual differences) of the Colugo, viz. one of the colour usually described, viz. cinereous, with transverse darker and lighter undulations; the other of a fine cinnamon or ferruginous colour, most vivid on the back, and paler beneath, and without any kind of variegation. There are also some trifling differences in the teeth of this reddish kind from those of the grey; but they are not such as to enable us to judge whether they are owing to age, or to a specific difference.

In the Leverian Museum is a fine specimen, in which the grey colour seems to predominate, owing to the very numerous whitish stripes across the back, as described by Camelli. This is the specimen figured in Mr. Pennant's Quadrupeds, and in the present work. Those figured in Seba

Heath sculp

FLYING LEMUR.

From the Leverian Museum.

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are probably young ones; they are described as of a ferruginous colour both above and below; yet in the coloured copies of that work, and particularly in the British Museum copy, once the property of Sir Hans Sloane, they are represented of a very deep or blackish cinereous above, and pale ferruginous beneath.

Lastly, In order that nothing might be wanting which might tend to convey a clear idea of an animal so curious, the excellent figure with which Dr. Pallas's account is accompanied in the Petersburgh Transactions, is also added in the present publication.

VESPERTILIO BAT.

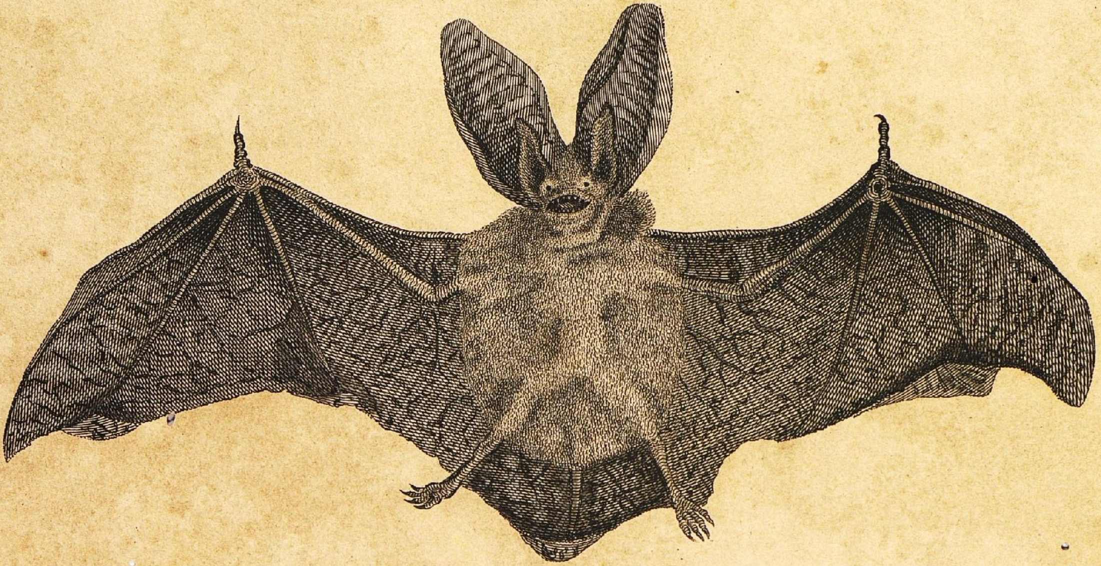
Generic Character.

Dentes omnes erecti, acuminati, approximati.	*Teeth* erect, sharp-pointed, approximated.
Manus palmatæ volitantes membrana corpus cingente.	*Hands* palmated with a membrane furrounding the body and giving the animal the power of flight.

THE curious formation of these animals cannot be contemplated without admiration: the bones of the extremities being continued into long and thin processes, connected by a most delicately-formed membrane or skin, capable, from its thinness, of being contracted at pleasure into innumerable wrinkles, so as to lie in a small space when the animal is at rest, and to be stretched to a very wide extent for occasional flight.

Should a speculative philosopher, not aware of the anatomical impossibility of success, attempt, by means of light machinery, to exercise the power of flight, he could not hit on a more plausible idea than that of copying the structure described. Accordingly a celebrated author has most justly and judiciously represented a sage theorist busied in imitating, for this purpose, "the folding continuity of the wing of a Bat."

The species of this extraordinary genus are numerous, and may be divided into the *tailed* and the *tailless* Bats.



LONG EARED BAT.

COMMON BAT.

Vespertilio Murinus. *V. caudatus, naso oreque simplici, auriculis capite minoribus. Lin. Syst. Nat. p.* 47.
Tailed Bat, with simple or inappendiculated nose, and ears smaller than the head.
Vespertilio murini coloris, auriculis simplicibus. *Briss. Quadr. p.* 158. *n.* 1.
Chauve-souris. *Buff.* 8. *p.* 114. *pl.* 16.
Short-eared English Bat. *Edwards, pl.* 201. *f.* 2.
Common Bat. *Pennant Quadr.* 2. *p.* 319.

This is about two inches and a half, if measured from the nose to the tip of the tail, and the extent of the wings, when fully expanded, is about nine inches. It is of a mouse-colour, tinged with reddish: the wings and ears black: these latter are small and rounded.

LONG-EARED BAT.

Vespertilio Auritus. *V. caudatus, ore nasoque simplici, auriculis duplicatis capite majoribus. Lin. Syst. Nat. p.* 47.
Tailed Bat, with inappendiculated nose, and double ears larger than the head.
Vespertilio murini coloris, auriculis duplicibus. *Briss. Quadr.* 160.
Vespertilio auriculis quaternis. *Johnst. av. p.* 34. *t.* 20.
Long-eared English Bat. *Edwards, pl.* 201. *f.* 3.
Oreillar. *Buff.* 8. *p.* 118. *pl.* 17. *f.* 1.
Long-eared Bat. *Pennant Quadr.* 2. *p.* 320.
Great-eared Bat. *Speculum Linnæanum, pl.* 7.

This species, in its general appearance, is nearly similar to the former, though rather small-

er; and the fur has less of the reddish tinge; but what immediately distinguishes it as a species, is the very great size of the ears, which are more than an inch long and of a very considerable width: they are slightly rounded at the tips, and are furnished internally, as in most others of this genus, with a kind of secondary auricle or internal flap, so placed as to serve by way of a valve or guard to the auditory passage. Linnæus, even in the twelfth edition of the Systema Naturæ, seems to entertain a doubt whether this species be really distinct from the former, or merely a sexual difference.

This and the former are the two most common species in this country; and are those which we so often see fluttering about in the evenings of summer and autumn; frequently uttering a sharp, stridulous note or scream during their flight, and pursuing the various kinds of insects on which they feed; particularly moths. They are sometimes taken by throwing up the heads of burdock whitened with flour; which the Bats, either mistaking for some insect, or casually dashing against, are caught by the hooked prickles and brought to the ground.

The Bat is capable, like the Mouse, of being tamed to a certain degree; and we are assured by Mr. White, in his Natural History of Selborne, that he was much amused in the summer of the year 1766 with the sight of a tame Bat. "It would take flies out of a person's hand. If you gave it any thing to eat, it brought its wings

round before the mouth, hovering, and hiding its head, in the manner of birds of prey when they feed. The adroitness it shewed in shearing off the wings of the flies, which were always rejected, was worthy of observation, and pleased me much. Insects seemed to be most acceptable, though it did not refuse raw flesh when offered; so that the notion that Bats go down chimnies and gnaw men's bacon, seems no improbable story. While I amused myself with this wonderful Quadruped, I saw it several times confute the vulgar opinion, that Bats, when down on a flat surface, cannot get on the wing again, by rising with great ease from the floor. It ran, I observed, with more dispatch than I was aware of, but in a most ridicu- and grotesque manner."—*White's Selb.*

Bats are commonly supposed to produce two young at a birth; which they suckle for a considerable time. When recently born they adhere most tenaciously to the breast of the parent, so as not to be removed without difficulty.

Bats lodge in great numbers in the cavities of old buildings, under the projections of walls, in the hollows of trees, in rocky places, &c. &c. During winter they lie torpid in these recesses, till the warmth of the vernal atmosphere invites them abroad to make their evening excursions. When taken torpid and brought into a warm situation, they awake from their slumber, and again expand their wings. During this state of torpidity the circulation of the blood is not to be

perceived in the smaller vessels; but when thus awakened by warmth it again becomes visible by the microscope. This was first observed by Leewenhoeck, who could perceive no appearance of circulation in such as were taken in their torpid state; but on bringing them to the fire, the circulation soon became very brisk.

Bats are said to drink on the wing, like swallows, by sipping the surface, as they play over pools and streams. They love to frequent waters, not only for the sake of drinking, but on account of the insects, which are found over them in the greatest plenty. "As I was going (says Mr. White), some years ago, pretty late, in a boat from Richmond to Sunbury, on a warm summer's evening, I think I saw myriads of Bats between the two places: the air swarmed with them all along the Thames, so that hundreds were in sight at a time."—*White's Selb.*

The general appearance of the Bat, together with its nocturnal flight, must be confessed to excite the idea of something hideous and dismal; and for this reason the ancients consecrated it to Proserpine, and supposed it to be one of the inhabitants of her dusky regions: and it cannot fail to occur to the recollection of every one, that painters, in their representations of fiends and demons, usually exhibit them with the leathern wings of the Bat. It is also equally evident, that the fabulous Harpies of the ancients must have originated from a similar source: the larger Bats of India and Africa, by a little poetical exaggera-

tion of their manners, answering extremely well to the general description of those monsters.

I know not whether it may be worth while to mention the celebrated experiments of Spallanzani, respecting a supposed additional sense or faculty in Bats, enabling them, when deprived of sight, to avoid any obstacles as readily as when they retained their power of vision. These experiments are cruel, and, perhaps, do not lead to any very important discoveries in the animal œconomy: nevertheless, that I may not seem entirely to neglect a phenomenon which has been thought worthy of attention by several eminent experimentalists, I shall here give a short abstract of the professor's observations.

Having observed that Bats would fly in the darkest chambers with precision, and not even touch the walls, he found them equally exact in their motions when the eyes were closely covered; and at length he destroyed the eyes, and covered the socket with leather; and even in this state the animal continued to fly with the same precision as before; avoiding the walls, and cautiously suspending its flight in seeking where to perch. It even flies out at a door without touching the architraves. The abbé repeated his experiments on several species of bats; and with the same success. These experiments were repeated by Vassalli at Turin, by Rossi at Pisa, Spadon at Bologna, and Jurin at Geneva. The professor's arguments for supposing that in these instances no other sense can supply the place of sight are these:

"*Touch* cannot, in this case, supply the place of sight, because an animal covered with hair cannot be supposed to have that sense very delicate. In flying through the middle of a sewer which turned at right angles, the Bats regularly bent their flight at the curvature, though two feet distant from the walls. They discovered holes for their retreat; found a resting-place on the cornice; avoided the branches of trees suspended in a room; flew through threads hung perpendicularly from the ceiling, without touching, though they were scarcely at a greater distance than that of their extended wings; and when the threads were brought nearer they contracted their wings to pass through them. They equally avoided every obstacle, though the whole head was covered with a varnish made of sandarach dissolved in spirit of wine.

"The *ear* could not have discovered a cornice or the threads: this sense, therefore, does not compensate the want of vision. Besides, Bats fly equally well when the ear is most carefully covered. The *smell* might possibly assist them; for when the nose was stopped, they breathed with difficulty, and soon fell. While they did fly, however, they avoided obstacles very well; and the smell could scarcely have assisted them in discovering the suspended threads. The *taste* must have been, in every respect, unequal to the task of supplying the place of sight."

From Mr. Jurin's anatomical observations on these animals, it appears that a very large propor-

tion of nerves is expanded on the upper jaw, the muzzle, and the organ of hearing; and these appeared to him, in a great degree, to account for the extraordinary faculty above described.

Mr. Carlisle's observations on this subject seem to prove that the sense of hearing in the Bat is uncommonly delicate, and is one of the principal causes of the dexterity with which these animals, even when blinded, avoid objects which would impede their flight. This gentleman collected several specimens of the Vespertilio auritus or large-eared Bat, and observed, that when the external ears of the blinded ones were closed, they hit against the sides of the room, without being at all aware of their situation. They refused every species of food for four days, as did a larger number which were afterwards caught and preserved in a dark box for above a week. During the day time they were extremely desirous of retirement and darkness; and, while confined to the box, never moved or endeavoured to get out during the whole day, and, when spread on the carpet, they commonly rested some minutes, and then beginning to look about, crawled slowly to a dark corner or crevice. At sunset the scene was quite changed: every one then endeavoured to scratch its way out of the box; a continued chirping was kept up, and no sooner was the lid of their prison opened than each was active to escape, either flying away immediately, or running nimbly to a convenient place for taking wing. When these Bats were first collected, several of the females had

young ones clinging to their breasts in the act of sucking. One of them flew with perfect ease, though two little ones were thus attached to her, which weighed nearly as much as their parent. All the young were devoid of down, and of a black colour.

NOCTULE BAT.

Vespertilio Noctula. *V. caudatus, naso oreque simplici, auriculis ovalibus operculatis; operculo exili. Lin. Syst. Nat. Gmel. p.* 48.
Tailed Bat, with nose and mouth simple; oval ears and very small valves.
Noctule. *Buff.* 8. *p.* 128. *pl.* 18. *f.* 1.
Great Bat. *Pennant Brit. Zool.*

This species is considerably larger than the former; its extended wings measuring from fourteen to fifteen inches: the length from nose to the tip of the tail about four inches and a half. The nose is slightly bilobated: the ears small and rounded: the body is fleshy and plump: the shoulders very thick and muscular; the fur very soft and glossy and of a bright chesnut-colour. This is an inhabitant of Britain and of France, but seems not to have been particularized as a distinct species, till described by M. Daubenton in Buffon's Natural History. It is said to be common in some parts of Russia, sheltering in caverns. It flies high in the air in search of food, and does not skim near the surface like the smaller Bats. It has been occasionally found in great quantities under the

eaves of old buildings, and has generally a strong and unpleasant smell.

HORSE-SHOE BAT.

Vespertilio Ferrum equinum. *V. caudatus, naso ferro equino simili, auribus caput æquantibus non operculatis, cauda dimidia corporis longitudine. Lin. Syst. Nat. Gmel. p.* 50.

Bat with horse-shoe-shaped nose, valveless ears, and tail half the length of the body,

Fer à Cheval. *Buff.* 8. *p.* 131, 132. *pl.* 17, 20.

With a horse-shoe-shaped membrane at the tip of the nose: ears large, broad at the base, and sharp-pointed, inclining backward: no smaller or internal ear: colour of the upper part of the body deep cinereous; of the lower, whitish. There is said to be a greater and smaller variety: perhaps the male and female: the greater is above three inches and half long from the nose to the tip of the tail; the extent of wings above fourteen: this species is found in France, and, very rarely, in England: it is also said to be found about the Caspian Sea.

SEROTINE BAT.

Vespertilio Serotinus. *V. caudatus flavescens, auriculis brevibus emarginatis. Lin. Syst. Nat. Gmel. p.* 41.
Tailed yellowish Bat, with short emarginated ears.
Serotine. *Buff.* 8. *p.* 129. *t.* 18. *f.* 2.

WITH a longish nose: ears short, but broad at the base: hair on the upper part of the body brown, mingled with ferruginous; the under part paler. Length from nose to rump two inches and a half: no tail. Native of France; and is also found in Russia.

PIPISTRELLE BAT.

Vespertilio Pipistrellus. *V. caudatus ex atrofuscus, fronte convexa, auriculis ovatis, emarginatis, capite vix longioribus. Lin. Syst. Nat. Gmel. p.* 48.
Tailed blackish-brown Bat, with convex front and ovate emarginated ears, scarce longer than the head.
Pipistrelle. *Buff.* 8. *p.* 129. *t.* 19. *f.* 1.
Pipistrelle. *Pennant Quadr.* 2. *p.* 318.

THIS is a very small species, and is found in France. The colour of the upper part of the body is yellowish-brown; the under part dusky. The lips yellow: the nose small; the upper lip swelling out a little on each side: the ears broad. The length from nose to rump scarce an inch and quarter: the extent of wings about six inches or rather more.

BARBASTELLE BAT.

Vespertilio Barbastellus. *V. caudatus, buccis elatis pilosis, auriculis magnis inferius angulatis. Lin. Syst. Nat. Gmel. p.* 48.
Tailed Bat, with elevated hairy cheeks, and large ears angulated on the lower part.
Barbastelle. *Buff.* 8. *p.* 130. *pl.* 19. *f.* 1.
Barbastelle. *Pennant Quadr.* 2. *p.* 319.

The length of the Barbastelle is about two inches from nose to tail: its extent about ten inches: the upper part of the body is of a dusky brown; the under part ash-coloured: the forehead sunk: the ears broad and long; the lower part of the inner sides touching each other, and thus concealing the face and head when viewed in front: the nose short: the cheeks full; the end of the nose flattened. It is found in France.

LASIOPTER BAT.

Vespertilio Lasiopterus. *V. caudatus, membrana pedes connectente latissima. Lin. Syst. Nat. Gmel. p.* 50.
Tailed Bat, with the membrane connecting the feet extremely broad, and covered on the upper part with hair.
V. Lasiopterus. *Schreb. Quadr. t.* 57. B.

With the forehead very prominent and rounded: nose short: the general colour ferruginous; the upper part of the wings of a paler cast; the ends and lower parts black: this is one of the larger species.

ROUGH-TAILED BAT.

Vespertilio Lasiurus. *V. caudatus labiis tumidis, cauda lata. Lin. Syst. Nat. Gmel. p.* 50.
Tailed Bat, with tumid lips and broad hairy tail.
V. lasiurus. *Schreb. Quadr. t.* 62. B.

With upright ears and small: tail broad at base; terminating in a point thickly covered with hair: colour a reddish-brown. A small species. Native country unknown.

MOLUCCA BAT.

Vespertilio Cephalotes. *V. caudatus, capite magno, labiis productis, naribus spiralibus, verrucis subocularibus, auriculis parvis non operculatis. Lin. Syst. Nat. Gmel. p.* 50.
Tailed yellowish-grey Bat, with large head, spiral nostrils, and small ears without valves.
V. cephalotes. *Pallas Spicil. Zool.*

This species was first described by Dr. Pallas, and is a native of the Molucca isles. The head is large; the nose thick: the ears small: the nostrils tubular, terminating outwards in the form of a screw: the upper lip is divided: the tongue covered with papillæ and minute spines: the claw or thumb joined to the wing by a membrane; and the first ray of the wing terminated by a claw: the end of the tail reaches beyond the membrane: the colour of the head and back is a greyish-ash; length from nose to rump three inches

and three quarters: extent of wings about fifteen. Mr. Pennant observes, that the specimen of this animal in the Leverian Museum is of a fine straw-colour: the belly dull white.

STRIPED BAT.

Vespertilio Pictus. *V. caudatus, naso simplici, auriculis infundibuliformibus appendiculatis. Lin. Syst. Nat. Gmel. p.* 42.

Tailed Bat, with simple nose and funnel-shaped appendiculated ears.

Autre Chauve-Souris. *Buff.* 10. *p.* 92. *pl.* 20. *f.* 3.

This is a Ceylonese species, and is one of the smaller Bats, measuring from nose to the end of the tail two inches. Its colour above is brown; the wings striped with black, and sometimes with tawny and brown: it varies sometimes in the colour of the body, which is reddish brown, with the under parts whitish: the nose is small and short: the ears short, broad, and pointing forwards.

NEW-YORK BAT.

Vespertilio Noveboracensis. *V. caudatus, cauda longa, naso brevi acuto, auribus brevibus rotundis. Lin. Syst. Nat. p. Gmel. p.* 50.

Long-tailed ferruginous Bat, with short sharp nose, short round ears, and a white spot at the base of each wing.

New-York Bat. *Pennant Quadr.* 2. *p.* 313.

Length from nose to tail two inches and a half: tail one inch and eight tenths: extent of

wings ten inches and a half. The head is shaped like that of a mouse: top of the nose a little bifid: ears short, broad, and rounded; no cutting-teeth: two canine in each jaw: tail very long, inclosed in the membrane, which is of a conic shape: head, body, and whole upper side of the membrane which encloses the tail, covered with long, soft hair of a bright tawny-colour, lightest on the head and beginning of the back: the belly paler: at the base of each wing a white spot: the wings thin, naked, and dusky; and the bones of the hind legs very slender. This is a native of North America, and seems to have been first described by Mr. Pennant: it is also found in New Zealand.

BEARDED BAT.

Vespertilio Hispidus. *V. caudatus pilosus, naribus canaliculatis, auriculis longis augustis. Lin. Syst. Nat. Gmel. p.* 48.
Tailed hairy Bat, with channeled nostrils and long narrow ears.
Bearded Bat. *Pennant Quadr.* 2. *p.* 313.

A SMALL species: colour above reddish-brown; beneath whitish, tinged with yellow: nostrils open for a great way up the nose: hair on the forehead and under the chin very long: ears long and narrow: tail included in a very veiny membrane.

SLOUCH-EARED BAT.

Vespertilio Auripendulus. *V. caudatus naso obtuso, auribus magnis dependentibus acuminatis.*

Tailed Bat, with abtuse nose, and large pendent ears with pointed tips.

Slouch-eared Bat. *Pennant Quadr. 2. p.* 313.

WITH large pendulous ears, pointed at the ends: nose obtuse: tail long, included in a membrane, and terminated with a hook: colour above deep chesnut; lighter on the belly, and cinereous on the sides: length three inches and four lines: extent of wing fifteen inches. Native of Guiana.

SLENDER-TAILED BAT.

Vespertilio Lepturus. *V. caudatus, naribus tubulatis, auriculis longis, obtusis operculatis, membranæ utrique pedes connectenti annexo interius marsupio. Lin. Syst. Nat. Gmel. p.* 50.

Tailed Bat, with tubular nostrils, slender tail, and a purse-shaped cavity on the interior part of each of the wings.

Pouch Bat. *Pennant Quadr. 2. p.* 312.

Slender-tailed Bat. *Pennant Quadr. 2. p.* 315.

WITH the nose somewhat lengthened: the end thickest, and beset with fine whiskers: the chin divided by a furrow: ears long, and rounded at the ends: on each wing, near the second joint, is a small purse or pouch: the tail is only in part involved by the membrane; the end hanging out:

colour of the body cinereous-brown; the under parts paler: length an inch and half. Native of Surinam.

SENEGAL BAT.

Vespertilio Nigrita. *V. caudatus ex flavescente fuscus, capitis parte anteriore, pedibus caudaque nigris.*

Tailed yellowish brown Bat, with the fore part of the head, the feet, and the tail black.

Senegal Bat. *Pennant Quadr. 2. p. 312.*

WITH a long head: nose a little pointed: ears short and pointed: head and body a tawny brown, mixed with ash-colour; under parts paler: the two last joints of the tail extending beyond the membrane: length from nose to rump above four inches: extent of wing twenty-one inches. Native of Senegal.

BULL-DOG BAT.

Vespertilio Molossus. *V. caudatus, cauda longa ultra membranam connectentem protensa, labio superiore pendulo. Lin. Syst. Nat. Gmel. p. 49.*

Bat, with pendulous upper lip, and long tail stretching beyond the connecting membrane.

Bull-dog Bat. *Pennant Quadr. 2. p. 311.*

IN this species the nose is thick: the ears broad and round; the edges touching each other in front: the lips are pendulous: the upper part

PERUVIAN BAT.

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of the body of a deep ash-colour; the lower paler: the tail long; the five last joints entirely disengaged from the membrane. Length above two inches; extent nine and a half. Inhabits the West Indies.

PERUVIAN BAT.

Vespertilio Leporinus. *V. caudatus, labio superiore bifido. Lin. Syst. Nat. Gmel. p.* 47.
Tailed Bat, with the upper lip bifid.
Noctilio Americanus. *N. labio superiore varicoso. Lin. Syst. Nat. ed.* 12. *p.* 88.
Vespertilio cato similis Americanus. *Seb. mus.* 1. *p.* 89. *t.* 55. *f.* 1.
Peruvian Bat. *Pennant Quadr.*

LINNÆUS, as Mr. Pennant well observes, carried away by the love of system, placed this species, in the twelfth edition of the Systema Naturæ, under a distinct genus, by the name of *Noctilio;* stationing it at a great distance from the rest of the Bats, in the order *Glires*, next to the Squirrels. This he did merely on account of its having only two cutting-teeth in each jaw. But succeeding observations have conspired to prove that the number and disposition of the teeth differs greatly in the different species of the Bats; so that if a too rigid regard were paid to this particular, several distinct genera might be instituted instead of one; but the general characters of the Bats are so striking as to render this perfectly unnecessary.

The Peruvian Bat has a head something like a Pug-Dog: the ears large and strait; sharp at the ends, and pointing forwards: two canine-teeth, and two small cutting-teeth between in each jaw: tail enclosed in the membrane, which joins to each hind leg, and is also supported by two long cartilaginous ligaments involved in the membrane: colour of the fur iron-grey: body equal in size to a middling rat: extent of wing two feet five inches. Mr. Pennant observes, that Mr. Schreber's figure of this species is erroneously coloured; being represented of a straw-colour. It is a native of Peru. An extraordinary conformation, according to Seba, takes place in the legs of this Bat; the tibia and fibula being placed separately from each other, and each invested by its own distinct and hairy skin. These, however, seem to be nothing more than the two cartilaginous ligaments mentioned by Mr. Pennant.

The remaining species (except the last) are distinguished by having no tails.

CORDATED BAT.

Vespertilio Spasma. *V. ecaudatus naso foliato obcordato. Lin. Syst. Nat. p.* 47.

Tailless Bat, with a doubly heart-shaped leaf-like membrane on the nose.

Glis volans ternatanus. *Seb.* 1. *t.* 56. *f.* 1.

Cordated Bat. *Pennant Quadr.* 2. *p.* 310.

With very broad and long ears: at the end of the nose an upright heart-shaped membrane: (in

Heath sculp.

CORDATED BAT.

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Seba's figure the membrane is doubly heart-shaped, or with two cordated divisions one above the other). The colour of the whole animal is a pale reddish brown: the hind legs are connected by a web: the body is thick and plump: the extent of wing, according to Seba's figure, seems to be about fifteen inches: length of body from nose to rump near four inches. Native of Ceylon and the Molucca islands.

LEAF BAT.

Vespertilio Soricinus. *V. ecaudatus, rostro producto, naso foliato cordato. Lin. Syst. Nat. Gmel. p.* 47.

Tailless Bat, with lengthened snout furnished with a heart-shaped leaf-like membrane.

Leaf Bat. *Pennant Quadr.* 2. *p.* 309.

Bat from Jamaica. *Edwards, pl.* 201. *f.* 1.

WITH small rounded ears: membrane on the nose in form of an ovate, pointed leaf: a web between the hind legs: fur of a mouse-colour, tinged with red: size of a common Bat.

JAVELIN BAT.

Vespertilio Hastatus. *V. ecaudatus, naso foliato trifolii figuram æmulante. Lin. Syst. Nat. Gmel. p.* 47.

Tailless Bat, with a trefoil-shaped upright membrane on the nose.

La Chauve-Souris à fer de lance. *Buff.* 13. *p.* 226. *pl.* 33. *and suppl.* 7. *p.* 292. *pl.* 74.

Javelin Bat. *Pennant Quadr.* 2. *p.* 309.

Vespertilio perspicillatus? *Lin. Syst. Nat. p.* 47.

WITH large pointed ears: an erect membrane at the tip of the nose in the form of an ancient javelin, having on each side two upright processes: fur cinereous: size of a common Bat. Inhabits the warmer parts of America. This is by Mr. Pennant made synonymous with the V. perspillatus of Linnæus, which is, however, considered as a distinct species in the Gmelinian edition of the Systema Naturæ.

GREAT SEROTINE BAT.

Vespertilio Nasutus. *V. ecaudatus ferrugineus, naso longo apice declivi, auribus longis erectis rotundatis.*

Tailless ferruginous Bat, with long nose sloping at the tip, and long upright rounded ears.

La Grande Serotine de Guianne. *Buff. suppl.* 7. *p.* 289. *pl.* 73.

Great Serotine. *Pennant Quadr.* 2. *p.* 318.

WITH a very long, strait, and strong nose, sloping down at the end: ears long, erect, dilated towards the bottom, rounded at the end: colour of

SPECTRE BAT.

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the upper parts a reddish chesnut: sides of a clear yellow; remainder of a dirty white: length five inches and eight lines: extent of wings two feet.

This species is described in the supplemental volume of the Count de Buffon's Natural History. It is a native of Guiana, where it is said to assemble in meadows and other open places in vast numbers; flying in company with Goatsuckers, and both together in such numbers as to darken the air.

SPECTRE BAT.

Vespertilio Spectrum. *V. ecaudatus, naso infundibuliformi lanceolato. Lin. Syst. Nat. p.* 46.

Tailless Bat, with funnel-shaped sharp-pointed membrane on the nose.

Canis volans maxima aurita ex nova Hispania. *Seb. mus.* 1. *p.* 92. *t.* 58. *f.* 1.

Spectre Bat. *Pennant Quadr.* 2. *p.* 308.

This is a large species, and is a native of South America, where it is chiefly seen on palm-trees. The extent of wings is about two feet two inches or more; and from the nose to the rump seven inches and a half. It has a long nose; large teeth; long, broad, and upright ears: and at the end of the nose is an upright, long, conical membrane, bending at the end. Hair on the body cinereous, and pretty long; wings full of ramified fibres: the membrane extends from hind

leg to hind leg: there is no tail; but three tendons run from the rump to the edge of the membrane.

Mr. Buffon supposes this to be the Vampyre; but if the accounts of that animal's extraordinary faculty may be depended upon, we are still uncertain as to the species; Piso and others, who give the relation, omitting the particular description of the animal; and, indeed, it is most probable that the faculty which gave rise to the name is by no means confined to a single species, but may be practised by several of the larger Bats in warm climates.

VAMPYRE BAT.

Vespertilio Vampyrus. *V. ecaudatus naso simplici, membrana inter femora divisa. Lin. Syst. Nat. p.* 46.

Tailless Bat with the nose simple, or without any appendage, and the flying membrane divided between the thighs.

Vespertilio ingens. *Clus. exot.* 94.

Vespertilio volitans. *Bont. Jav.* 68. *t.* 69.

Canis volans ternatanus orientalis. *Seb.* 1. *t.* 57.

Roussette. *Buff.* 10. *p.* 55. *t.* 14. *and* 17.

Ternate Bat. *Pennant Quadr.* 2. *p.* 304.

Vampyre Bat. *Spec. Lin. t.* 8.

Of this tremendous animal there are some varieties in point of size and colour; or perhaps they may really be distinct races or species, though nearly allied. The largest, or the Great Ternate

VAMPYRE BAT.

1800. Feb.y 1 London. Publish'd by G. Kearsley. Fleet Street.

Heath sculp.

Bat, is, in general, about a foot long, with an extent of wings about four feet; but sometimes it is found far larger, and it has been said that specimens have been seen of six feet in extent. The general colour of the body is a deep reddish brown; brighter on the upper part of the neck and shoulders, as well as on the under parts of the body. The nose is sharp and black: the teeth large and sharp: there are four cutting-teeth both above and below; and the canine-teeth are large and strong: the tongue is pointed, and terminated by sharp prickles: the ears are naked, blackish, and large, and are of a pointed form. The wings are black, or of the colour of those of the common Bat. The membrane is divided behind, quite to the rump; there being no tail: the single claw on the wings is large and strong; and those on the feet extremely so, as well as much curved.

This is the Bat to which Linnæus applied the title of Vampyre, on the supposition of its being the species of which so many extraordinary accounts have been given relative to its power of sucking the blood both of men and cattle. This it is supposed to perform by inserting its aculeated tongue into the vein of a sleeping person, in so peculiar a manner as not to excite pain; fanning, at the same time, the air with its wings, by which means the sleep is rendered still more profound. This is what appears at first so extraordinary as to justify a degree of scepticism as to the fact: it is, however, so solemnly related, and

seemingly so well authenticated, as almost to enforce belief. Mr. Condamine assures us, that the large Bats have, in certain parts of America, destroyed, by this means, all the great cattle introduced there by the missionaries. It is affirmed by Bontius, as well as Nieuhoff, that the Bats of Java attack those who lie with their feet uncovered, whenever they can gain access: and Gumilla, who mentions a greater and lesser kind, found on the banks of the Oronoque, declares them to be equally greedy after human blood: persons thus attacked have, in consequence, been near passing from a sound sleep into eternity. It is, therefore, very unsafe to sleep with open windows, or in the open air, in those regions.

P. Martyr, who wrote soon after the conquest of South America, says, that in the Isthmus of Darien, there are Bats which suck the blood of men and cattle, when asleep, to such a degree as to awaken, and even kill them.

Lastly, Though it seems to have escaped the attention of modern naturalists, the self-same faculty has been, time out of mind, attributed to the common European Bats, which are said to bite sleeping persons, and to suck the blood with the greatest avidity. This is mentioned by Aldrovandus, who seems to relate it as a generally-received opinion; observing, at the same time, that their attacks are infinitely inferior to the dangerous ones of the large exotic Bats in India and America.

It remains to explain the reason of the term Vampyre, by which the above large species has been distinguished.

A Vampyre is an imaginary monster, supposed to suck the blood of sleeping persons. It also alludes to one of the most absurd superstitions that ever entered into the human mind. About the year 1732 an idea arose among the vulgar in some parts of Poland and Hungary, that certain bodies when interred, became possessed of the power of obsorbing blood from those who were so unfortunate as to pass over or stand near their graves, it was, therefore, supposed necessary to disinter such bodies and wound them with a sword, by which means this pernicious power was supposed to be put a stop to, and the blood they had unjustly gained was evacuated. Astonishing as this folly may appear, it is yet more astonishing that a great many treatises were written on the subject, and that some considerable time elapsed before the superstition was completely destroyed.

PIT-NOSE BAT.

Vespertilio Speoris. *Schreb. suppl.*
Vespertilio caudatus, fossula frontali transversa.
Tailed Bat, with a transverse frontal cavity.

THIS species, from Mr. Schreber's representation, appears to be about the size of the common Bat, which it also resembles in its general aspect,

but differs in its colour, being of a pale yellowish ash-brown. Its principal character is a remarkable transverse concavity situated on the forehead, lined with a naked blackish skin: the nostrils are seated in a similar concavity at the tip of the nose. It is a native of India. The circumstance of the frontal cavity is not absolutely peculiar to this animal, having been observed, though in a much less conspicuous degree, in another species: the use of this peculiar formation seems as yet unknown.

THREE-TOED SLOTH.

ORDER

BRUTA.

BRADYPUS. SLOTH.

Generic Character.

Dentes Primores nulli utrinque.	*Cutting-teeth*, none in either jaw.
Laniarii obtusi, solitarii, molaribus longiores, occursantes.	*Canine-teeth* obtuse, single, longer than the grinders, placed opposite.
Molares utrinque quinque, obtusi.	*Grinders*, five on each side, obtuse.
Corpus pilis tectum.	*Fore Legs* much longer than the hind: *Claws* very long.

THREE-TOED SLOTH.

Bradypus Tridactylus. *B. pedibus tridactylis, cauda brevi. Lin. Syst. Nat. p.* 50.

Sloth with three-toed feet and short tail.

Ignavus. *Clus. exot. p.* 372. *fig. p.* 373.

Ai. *Buff.* 13. *p.* 34. *pl.* 5, 6.

Three-toed Sloth. *Pennant Quadr.* 2. *p.* 240.

Museum Leverianum, vol. 2. *p.* 13. *pl.* 3.

BEFORE the discovery of the western hemisphere, the Tortoise seems to have been considered as the established representative of tardi-

ness: but those who attended to the natural history of the new world, were astonished to find in a genuine viviparous quadruped a much more singular example of languid motion and habitual inactivity. The early accounts, however, of this extraordinary animal seem to have been given with some degree of exaggeration; and it was pretended that the creature could scarce advance a stone's throw in the space of fifteen days: that it required eight or nine minutes in order to move one foot to the distance of three inches: other accounts say, that the Sloth can scarcely move fifty paces in a day: all, however, who have had opportunities of examining this species in its native climates, agree in representing it as the most torpid of quadrupeds; that it seems to move with the utmost difficulty, and it never exerts its progressive powers except when urged by the necessity of obtaining food; when it climbs, with great labour, to the tops of trees; and having gained this situation, continues to reside there till it has despoiled the tree of its foliage and fruit, when it is obliged to descend and to seek a fresh situation: it is added, that in order to save itself the slow and laborious descent which it would otherwise be obliged to make, it suffers itself to fall to the ground; its tough skin and thick coarse hair sufficiently securing it from any unpleasant effect in its fall. The general appearance of the Sloth is extremely uncouth; the body is of a thick shape; the fore legs short; the hinder ones far longer: the feet, on all the legs, are very small, but

are armed each with three most excessively strong and large claws, of a slightly curved form, and sharp-pointed. The head is small; the face short, with a rounded or blunt snout, which is naked and of a blackish-colour: the eyes are small, black, and round: the ears rather small, flat, rounded, lying close to the head, and not unlike those of Monkies. The hair on the top of the head is so disposed as to project somewhat over the forehead and sides of the face, giving a very peculiar and grotesque physiognomy to the animal. The general colour of the hair on all parts is a greyish brown, and the hair is extremely coarse, moderately long, and very thickly covers the body, more especially about the back and thighs. A remarkable character as to colour in this species, is a wide patch or space on the upper part of the back, of a bright ferruginous or rather pale orange-colour, spotted on each side with black, and marked down the middle with a very conspicuous black stripe; wide at its origin, and gradually tapering to its extremity: it reaches more than half way down the back, and terminates in a sort of trifid mark; so that the whole gives a highly singular appearance to the animal, when viewed from behind. This particularity is remarkably distinct in the very fine specimen preserved in the Leverian Museum. So far as I am able to determine, from the inspection of numerous specimens, it is scarce, if at all, visible in the young animals, which are merely of an uniform greyish brown. The tail is nearly imperceptible, being so ex-

tremely short as to be concealed from view by the fur.

The Count de Buffon, in one of those flights of paradoxical eloquence in which he sometimes indulged, is not willing to allow this creature any share in contributing to the general beauty in the scale of animated nature; but considers it as an ill-constructed mass of deformity, created only for misery; which he thinks is the less to be wondered at, when, perhaps, the major part of mankind experience a similar fate.

"From a defect in their conformation, the misery of these animals is not more conspicuous than their slowness. They have no cutting-teeth; the eyes are obscured with hair; the chaps are heavy and thick; the hair is flat, and resembles withered herbs; the thighs are ill jointed to the haunches; the legs are too short, ill turned, and terminated still worse; their feet have no soles, and no toes which move separately, but only two or three claws disproportionately long, and bended downwards, which move together, and are more hurtful to their walking, than advantageous in assisting them to climb. Slowness, habitual pain, and stupidity, are the results of this strange and bungled conformation. The sloths have no weapons either offensive or defensive. They are furnished with no means of safety; for they can neither fly nor dig the earth. Confined to a small space, or to the tree under which they are brought forth, they are prisoners in the midst of space, and cannot move the length of one fathom in an hour. They

drag themselves up a tree with much labour and pain: their cry and interrupted accents they dare only utter during the night. All these circumstances announce the misery of the Sloths, and recal to our minds those defective monsters, those imperfect sketches of nature, which, being hardly endowed with the faculty of existence, could not subsist for any length of time, and have accordingly been struck out of the list of beings. If the regions inhabited by the Sloths were not desert, but had been long occupied by men and the larger animals, these species would never have descended to our times; but would have been annihilated, as in some future period will be the case. We formerly remarked, that every thing that possibly could be did really exist: of which the Sloths are a striking example. They constitute the last term of existence in the order of animals endowed with flesh and blood. One other defect added to the number would have totally prevented their existence. To regard those bungled sketches as beings equally perfect with others, to call in the aid of final causes to account for such disproportioned productions, and to make Nature as brilliant in these as in her most beautiful animals, is to view her through a narrow tube, and to substitute our own fancies for her intentions. Why should not some animals be created for misery, since in the human species the greatest number of individuals are devoted to pain from the moment of their existence? Evil, it is true, proceeds more from ourselves than from Nature. For a single

person who is unhappy because born feeble or deformed, there are millions rendered miserable by the oppression of their superiors. The animals, in general, are more happy, because the species have nothing to fear from individuals: to them there is but one source of evil; to man there are two. Moral evil, of which he himself is the fountain, has accumulated into an immense ocean, which covers and afflicts the whole surface of the earth. Physical evil, on the contrary, is restrained within very narrow bounds: it seldom appears alone; for it is always accompanied with an equal, if not a superior, good. Can happiness be denied to animals, when they enjoy freedom; have the faculty of procuring subsistence with ease; and possess more health, and organs capable of affording greater pleasure than those of the human species? Now the generality of animals are most liberally endowed with all these sources of enjoyment. The degraded species of Sloths are perhaps the only creatures to whom Nature has been unkind, and who exhibit to us the picture of innate misery."

With submission, however, to this lively naturalist, I should not hesitate to believe that the Sloth, notwithstanding this appearance of wretchedness and deformity, is as well-fashioned for its proper modes and habits of life, and feels as much happiness in its solitary and obscure retreats, as the rest of the animal world of greater locomotive powers and superior external elegance.

The sloth feeds entirely on vegetables, and par-

ticularly on leaves and fruit. Its voice is said to be so inconceivably singular, and of such a mournful melancholy, attended, at the same time, with such a peculiarity of aspect, as at once to excite a mixture of pity and disgust; and, it is added, that the animal makes use of this natural yell as its best mode of defence; since other creatures are frightened away by the uncommon sound. This, however, is far from being its only refuge; for so great is the degree of muscular strength which it possesses, that it is capable of seizing a dog with its claws, and holding it, in spite of all its efforts to escape, till it perishes with hunger; the Sloth itself being so well calculated for supporting abstinence, that the celebrated Kircher assures us of its power in this respect having been exemplified by the very singular experiment of suffering one, which had fastened itself to a pole, to remain in that situation, without any sustenance, upwards of forty days. This extraordinary animal is an inhabitant of the hotter parts of South America. It is nearly as large as a middle-sized dog.

VAR. ?

The stiff and awkward representation of this animal in Edwards's gleanings of Natural History, was executed from a dried specimen, which had been set up in that position. Edwards observes, that all the figures which he had seen were erroneous, in representing the hair as growing to the very roots of the claws; whereas, in the abovemen-

tioned specimen, it did not reach more than to within an inch and half of the claws; a bare space intervening. The consideration of this circumstance has induced some observers, with unnecessary scrupulosity, to consider it as a distinct species; but it is probable that this bare appearance round the feet was merely owing to some accidental circumstance. It is certain that the hair in uninjured specimens of the three-toed Sloth grows absolutely to the very roots of the claws; if, however, the above animal was in a truly natural state, it would justify a separation from the rest, as a variety rather than as a distinct species.

TWO-TOED SLOTH.

Bradypus Didactylus. *B. manibus didactylis, cauda nulla. Lin. Syst. Nat. p.* 51.

Sloth with two toes on the fore feet, and without a tail.

Bradypus pedibus anticis didactylis, posticis tridactylis. *Bris. Quadr. p.* 22.

Unau. *Buff.* 13. *p.* 34. *pl.* 1.

Two-toed Sloth. *Museum Leverianum, vol.* 1. *p.* 79. *No.* 2. *pl.* 7. *Pennant Quadr.* 2. *p.* 242.

This species is also a native of South America; and it is asserted, on good authority, that it is likewise found in some parts of India, as well as in the island of Ceylon. In its general appearance, as well as in size, it bears a considerable resemblance to the former species: it is, however, somewhat more slender in its shape; covered with smoother or less coarse and harsh hair; and is of a

Heath sculp.

TWO TOED SLOTH.

more uniform or less varied tinge; having no marks or shades of black and ferruginous as in the former; and, in particular, is strikingly distinguished, as a species, by having only two claws on the fore feet: it is also a much more active animal, and, even when imported into Europe, has been known, according to the testimony of the Count de Buffon, to ascend and descend from a tall tree several times in a day; whereas the three-toed Sloth with difficulty performs that operation in a whole day; and can scarce crawl some hundred yards in the space of many hours. The disposition of the hair on the head of the two-toed Sloth differs also from that of the former animal, and is directed immediately backwards, without being in the least reversed round the front as in that species. A very fine specimen may be seen in the Leverian Museum; and a young one not much larger than a Squirrel, and of a very light or whitish colour is in the British Museum, as well as a more advanced specimen, preserved in spirits.

In Mr. Carlisle's description of the remarkable disposition of the trunks of the subclavian and iliac arteries in the Lemur tardigradus, he very properly observed, that "it would be of some importance in physiology to ascertain whether the other slow-moving Quadrupeds have any peculiar arrangement of the arteries of their limbs," the single fact above recorded being hardly suffi-

cient for the foundation of any theoretical explanation of the slow movement of the muscles. The British Museum afforded an opportunity of investigating this particular in other slow-moving Quadrupeds, and Mr. Carlisle, at my request, examined the arteries of the Bradypus tridactylus, of all Quadrupeds yet known the slowest in its movements; when the same remarkable distribution of vessels presented itself, both in the upper and lower limbs; and the small divisions of the artery, forming the surrounding cylinder, were still more numerous than in the Slow Lemur, viz. not less than 60 or 65, and in the lower limbs, at least, as many: these small cylinders were also connected by several lateral or anastomosing branches. We then opened a specimen of the Bradypus didactylus, an animal far less slow in its motions than the tridactylus. In this species a distribution indistinctly approaching to that above described was discovered, but with much fewer divisions, and more approaching to the usual distribution in other Quadrupeds. Lastly, A Lemur Loris, or Slender-limbed Lemur, was examined; when it appeared that the trunk of the artery, both in the upper and lower limbs, was surrounded by only four or five smaller cylinders, instead of the numerous ones so remarkable in the Slow Lemur, &c.

URSINE SLOTH

URSINE SLOTH.

Bradypus Ursinus. *B. niger hirsutissimus, naso elongato nudo, pedibus pentadactylis.*

Black Sloth, with very long shaggy hair, lengthened snout, and five-toed feet.

Ursine Bradypus, or Ursiform Sloth. *Naturalist's Miscellany, vol. 1. pl. 58.*

Ursiform Sloth. *Pennant Quadr. 2. p. 243. pl. 92.*

Petre Bear. *Catton's Figures of Animals.*

This, which is by far the largest species of Sloth, is a native of India, and has been but lately introduced to the knowledge of European naturalists. It was brought from the neighbourhood of Patna in Bengal. This animal has, at first sight, so much of the general aspect of a bear, that it has actually been considered as such by some observers; but it is no otherwise related to the Bear than by its size and habit, or mere exterior outline. This species I first examined with accuracy in company with Mr. Pennant, and with him collated its characters with those of the Sloths. I described it in the second volume of the Naturalist's Miscellany; and Mr. Pennant afterwards introduced it into the last edition of his History of Quadrupeds. An excellent figure had some time before been published by an ingenious artist, which has been repeated both in the Naturalist's Miscellany, and in the History of Quadrupeds; and is, on account of its superior accuracy, again copied in the present work. It expresses, in a peculiarly striking and just manner,

the appearance of the animal; and is, besides, accompanied with a view of the open mouth, &c. to shew the situation and form of the teeth. I must here observe, that the figure represented in the *Journal de Physique*, though a good general representation of the animal in its walking posture, is erroneous in the article of the claws; those on the hind feet being shewn equally large with those of the fore feet; which is by no means the case.

The Ursine Sloth is about the size of a Bear, and is covered all over, except on the face, or rather the snout, which is bare and whitish, with long, shaggy, black hair; which on the neck and back is much longer than elsewhere. On the fore part of the body the hair points forwards; on the hinder part backwards. The eyes are very small: the ears rather small, and partly hid in the long hair of the head. It is totally destitute of incisores or front-teeth: in each jaw are two canine-teeth of a moderate size: those in the upper jaw are situated at the distance of two inches from each other; those in the lower jaw are placed somewhat less remote. The molares or grinders in the upper jaw are placed three on each side; of which the two most remote are double or lobed: the remaining one simple. In the lower jaw there are on each side six grinders, of which the most remote or backward is simple; the two next double, and the three remaining ones simple. The tongue is smooth, and has nothing remarkable in its appearance. The nose or snout is of a

somewhat elongated form; it also appears as if furnished with a sort of transverse joint, or internal cartilage, which admits of a peculiar kind of motion in this part. The claws on the fore feet are five in number, and are excessively strong; moderately crooked, and sharp-pointed: those on the hind feet are shorter, and of a rounder shape. The tail is very short, and inconspicuous. The animal, at the time this description was drawn up, was thought to be somewhat more than four years old. When first taken it is said to have been about the size of a raccoon, and to have sometimes barked in the manner of a dog. Its voice, however, when examined as above, was a sort of short, abrupt roar, which it uttered when much disturbed or irritated. It was a gentle and good-natured animal; it fed chiefly on vegetable substances and milk; was fond of apples, and did not willingly eat animal food, except of a very tender nature, as marrow, which it readily sucked from a bone presented to it. It was also delighted with honey, sugar, and other sweets. Its motions were not, as in the two former species, slow and languid, but moderately lively; and it appeared to have a habit of turning itself round and round every now and then, as if for amusement, in the manner of a dog when lying down to sleep. It was said to have a propensity to burrowing under the ground; and it was added, that it had been dug out of its subterraneous retreat by those who first discovered it.

MEGATHERIUM.

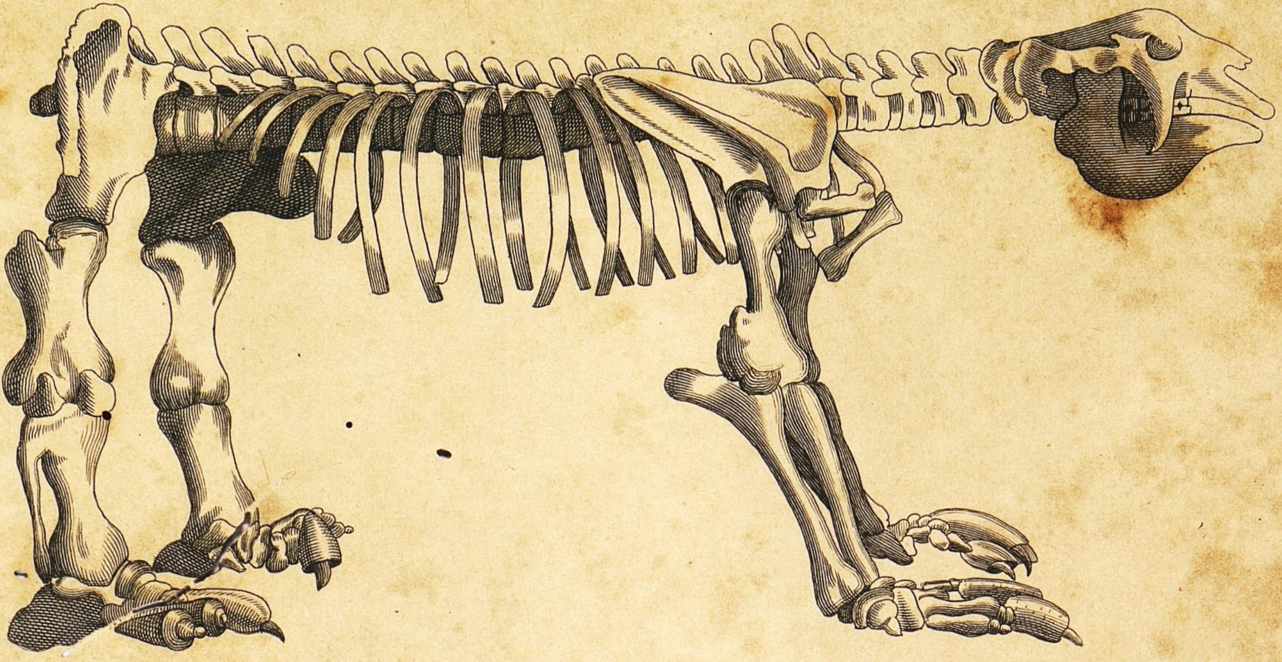
In compliance with the opinion of Mons. Cuvier, who appears to have accurately examined it, we shall here introduce this curious animal; hitherto unknown, except from its skeleton, discovered in a fossil state, some years ago, in South America; and which, Mr. Cuvier thinks, approaches much nearer to the genus Bradypus or Sloth than to any other yet known.

Mr. Cuvier's account is as follows:

"This skeleton is fossil. It was found a hundred feet beneath the surface of a sandy soil, in the vicinity of the river of La Plata. It only wants the tail, and some pair-bones, which have been imitated in wood; and the skeleton is now mounted at Madrid.

"This skeleton is twelve feet (French) long, by six feet in height. The spine is composed of seven cervical, sixteen dorsal, and four lumbar vertebræ: it has consequently sixteen ribs. The sacrum is short: the ossa ilia very broad; and their plane being almost perpendicular to the spine, they form a very open pelvis. There is no pubis or ischium; at least they are wanting in this skeleton, and there is no mark of their having existed when the animal was alive.

"The thigh bones are excessively thick, and the leg bones still more so in proportion. The entire sole of the foot bore on the ground in walk-



MEGATHERIUM AMERICANUM.

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Mutlow. sc.

ing. The shoulder-blade is much broader than long. The clavicles are perfect, and the two bones of the fore-arm are distinct and moveable upon each other. The fore limbs are longer than the hind. To judge by the form of the last phalanxes, there must have been very large pointed claws, enclosed at their origin in a long sheath. There appears to have been only three of these claws on the fore feet, and a single one on the hind. The other toes seem to have been deprived of them, and, perhaps, entirely concealed beneath the skin.

"The head is the greatest singularity of this skeleton. The occiput is elongated and flattened, but it is pretty convex above the eyes. The two jaws form a considerable projection, but without teeth, there being only four on each side above and below, all grinders, with a flat crown, and grooved across. The breadth of the branches of the lower jaw, and the great apophysis placed on the base of the zygomatic arch, deserve particular notice.

"This quadruped, in its characters, taken together, differs from all known animals; and each of its bones, considered apart, also differs from the corresponding bones of all known animals. This results from a detailed comparison of the skeleton with that of other animals, and will readily appear to those who are conversant in such researches; for none of the animals which approach it in bulk have either pointed claws, or similarly formed head, shoulder-blades, clavicles, pelvis, or limbs.

"As to its place in the system of quadrupeds, it is perfectly marked by the sole inspection of the ordinary indicatory characters, that is, the claws and teeth. These shew that it must be classed in the family of unguiculated quadrupeds destitute of cutting-teeth; and, in fact, it has striking relations with these animals in all parts of its body. This family is composed of the *Sloth (Bradypus)*, *Armadillo (Dasypus)*, *Pangolin (Manis)*, *Ant-Eater (Myrmecophaga)*, and *Orycteropus* or *Cape Ant-Eater*.

"The great thickness of the branches of the lower jaw, surpassing even that of the elephant, seems to prove that the vast animal was not content with leaves, but, like the elephant and rhinoceros, broke and ground the branches themselves; its close and flat-crowned teeth appearing very proper for that purpose. The position of the bones of the nose, having some analogy with that of the elephant and tapir, would induce a suspicion that our animal wore a trunk, but it must have been very short, since the length of the head and neck together equals that of the fore legs. However this be, we find in the absence of canine-teeth, and the shortness of the muzzle, sufficient characters to constitute a new genus in the family of the *edentated*, which ought to be placed between the Sloth and the Armadillo; since to the shape of the head of the former, it joins the teeth of the latter. It would be necessary to know particulars of which a skeleton cannot inform us, such as the nature of the teguments, the form of the tongue,

the position of the mammæ, &c. in order to determine to which of these it approached the most. In the mean time, I thought I might give it the generic name of MEGATHERIUM, and the trivial one of *Americanum.*

"It adds to the numerous facts which apprize us that the animals of the ancient world were all different from those we now see on the earth; for it is scarcely probable that, if this animal still existed, so remarkable a species could have hitherto escaped the researches of naturalists. It is also a new and very strong proof of the invariable laws of the subordination of characters, and the justness of the consequences thence deduced for the classification of organized bodies; and under both these views it is one of the most valuable discoveries which have for a long time been made in Natural History."

MYRMECOPHAGA. ANT-EATER.

Generic Character.

Dentes nulli.
Lingua teres, extensilis.
Os angustatum in rostrum.

Corpus pilis tectum.

Teeth, none.
Tongue cylindric, extensile.
Mouth lengthened into a somewhat tubular form.
Body covered with hair.

THE animals of this genus live entirely on insects, more particularly on the various kinds of Ants; in order to obtain which, they extend their tongue, which is of a very great length, and of a roundish or worm-like form, into the nests of those insects, and when, by means of the viscid moisture with which it is covered, a sufficient number are secured, they retract it suddenly into the mouth and swallow them. A part of the generic character of the Myrmecophaga is the total want of teeth, in which particularity it resembles no other animals except those of the genus Manis, in which the same circumstance takes place. There are, however, in the Ant-Eaters according to the observations of Mons. Broussonet, certain bones or processes not unlike teeth, situated deep

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at the entrance of the gullet or œsophagus; or rather, according to the celebrated Camper, at the lower end of the jaws. The species of Ant-Eaters are not numerous.

GREAT ANT-EATER.

Myrmecophaga Jubata. *M. palmis tedradactylis, plantis pentadactylis cauda jubata. Lin. Syst. Nat. p.* 52.

Grey-brown Ant-Eater, with four toes on the fore feet, five on the hind, long snout, and very long bushy tail.

Tamanoir. *Buff.* 10. *p.* 141. *pl.* 29.

Great Ant-Eater. *Pennant Quadr.* 2. *p.* 256.

Museum Leverianum, vol. 1. *p.* 99. *pl.* 12.

This is by far the largest of the Ant-Eaters, being upwards of seven feet in length, from the tip of the nose to the end of the tail; but if measured to the origin of the tail, it is no more than about five feet and a half. It is an animal of an uncouth appearance: the head is small: the snout very long: the eyes small: the ears short and round: the shoulders thick and muscular, from whence the body tapers towards the tail; but the thighs are thick and stout: the colour of the animal is a deep grey, with a very broad band of black running from the neck downwards on each side the body, growing gradually narrower as it passes down; this black band is accompanied on the upper part by a streak of white; the fore legs are of a lighter cast than the hinder; and have a patch or spot of black in front no-

much above the foot: the tail is black, extremely long and bushy: the hair on the whole body, but especially on the tail, is very harsh and coarse: there are four toes on the fore feet, and five on the hind; the two middle claws of the fore feet are extremely large and strong; which render this creature, though destitute of teeth, a very formidable adversary; since it has been known to destroy animals of much greater apparent strength than itself; fixing its claws upon them, and exerting such powerful strength as to kill them by continued laceration and pressure. It is a native of Brasil and Guiana: it is chiefly a nocturnal animal, and is said to sleep during the greatest part of the day in retired places. Its pace is somewhat slow, and its manners dull and heavy. It is said to swim with ease; at which time it flings its tail over its back. A living specimen was some years ago brought into Spain, and kept in the Royal Menagerie at Madrid: in this state of confinement it would readily eat raw meat cut small, and was said to swallow four or five pounds in a day. Its length was six feet, from the nose to the end of the tail, and its height was two feet. The specimen in the Leverian Museum is of superior size, and is commemorated by Mr. Pennant, in his History of Quadrupeds, as being the largest specimen he ever heard of. Its dimensions, however, do not seem to exceed those of a skin preserved in the British Museum, and which once belonged to that of the Royal Society. A beautiful figure of the Leverian speci-

MIDDLE ANT-EATER.

1800 Feb.y 1 London Published by G. Kearsley Fleet Street.

Heath sculp.

men is given in No. 2. of the Museum Leverianum, and is copied in the present work.

MIDDLE ANT-EATER.

Myrmecophaga Tetradactyla. *M. palmis tetradactylis, plantis pentadactylis, cauda calva. Lin. Syst. Nat. p.* 52.

Ant-eater, with four toes on the fore feet, five on the hind, and half-naked prehensile tail.

THIS species, which is far inferior in size to the former, has a long slender nose, bending down a little: the mouth is black: the eyes small: the ears small and upright. The general colour of the animal is a palish yellow-brown; the hair somewhat shining, and of a hard nature: on each side of the neck is an oblique black or dusky band, crossing the shoulders, and passing toward the lower part of the back: the tail, which is covered with longer hair than the back, is thickish at the base, but tapers towards the end where it is nearly bare, having the same prehensile power as in some of the Monkies. On each of the fore feet are four toes, armed with strong claws, the middle ones extremely so. On the hind feet are five claws, small in comparison with the former. The length of the animal from nose to tail is one foot seven inches: of the tail ten inches. It inhabits the same parts of South America with the Great Ant-Eater, and its manners are similar. It also climbs trees, and occasionally clings by its tail to the branches.

THREE-TOED ANT-EATER.

Myrmecophaga Tridactyla. *M. palmis tridactylis, palmis tetradactylis, cauda villosa. Lin. Syst. Nat. p.* 51.

Ant-Eater, with three toes on the fore feet, four on the hind aud villose tail.

Tamandua-guacu. *Seb.* 1. *p.* 60. *t.* 37. *and p.* 65. *t.* 40. *f.* 1.

This, which must be considered as an obscure species, seems to have been first mentioned by Seba, and from him adopted by Linnæus and Brisson. The figures, however, which Seba gives, represent equally well the Four-toed Ant-Eater or Myrmecophaga tetradactyla of Linnæus, from which they only appear to differ in having pendulous ears, and three toes instead of four on the fore feet. It, therefore, seems highly probable that this supposed species may be rather a variety of the M. tetradactyla than truly distinct. Linnæus, in his slight description, mentions a lateral black band, and adds, that the tail is broad and villose, and that the animal carries it over its back and covers itself with it: he also says that the back has a longitudinal mane*. It is a native, according to Linnæus, of India.

In the Leverian Museum are two specimens of the *M. tetradactyla*, which in general appearance agree with the abovementioned figures of Seba, except having the head rather smaller in proportion, as well as the ears: yet there can be little doubt of their being in reality the same species.

* Neither this nor the black band are mentioned by Seba.

STRIPED ANT-EATER.

THREE TOED ANT-EATER. *from Seba.*

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The Three-toed Ant-Eater of Seba may, therefore, be a mere variety of the Four-toed or Tetradactyla, and perhaps neither the black lateral band, nor the pendulous ears, ought to considered as constituting a permanent or specific character. It is remarkable that Mr. Pennant, in his History of Quadrupeds, makes no mention of the M. tridactyla.

For the satisfaction of the reader, Seba's figure of this supposed species is represented in the present work, and those who are conversant in natural History will readily perceive that it can scarce be allowed to differ from the Myrmecophaga tetradactyla. On the other hand, I ought not to omit an observation of Mr. Vosmaer, who received from the Cape of Good Hope a specimen preserved in spirits of wine, and which he supposed to be a new-born animal, though as large as a young pig. He affirms that Seba's figures are very good; that they represent a perfectly distinct species, viz. that of which he received the young; but that the fore feet are furnished with four claws. Thus, in reality, the Seban animal, though erroneously mentioned as having only three toes on the fore feet, may still be, in all other respects, a very exact representation of a species not yet perfectly described; while the Linnæan tridactyla must continue unknown, unless he really meant the animal of Seba.

LITTLE ANT-EATER.

Myrmecophaga Didactyla. *M. palmis didactylis, plantis tedradactylis cauda prehensili.*

Ant-Eater, with two toes on the fore feet, four on the hind, and prehensile tail.

M. palmis didactylis, plantis tetradactylis, cauda villosa. Lin. Syst. Nat. p. 51.

Tamandua seu Coati Americana alba. *Seb.* 1. *p.* 60. *t.* 37. *f.* 3.

Little Ant-Eater. *Edw. pl.* 220.

Fourmiller. *Buff.* 10. *p.* 144. *pl.* 30.

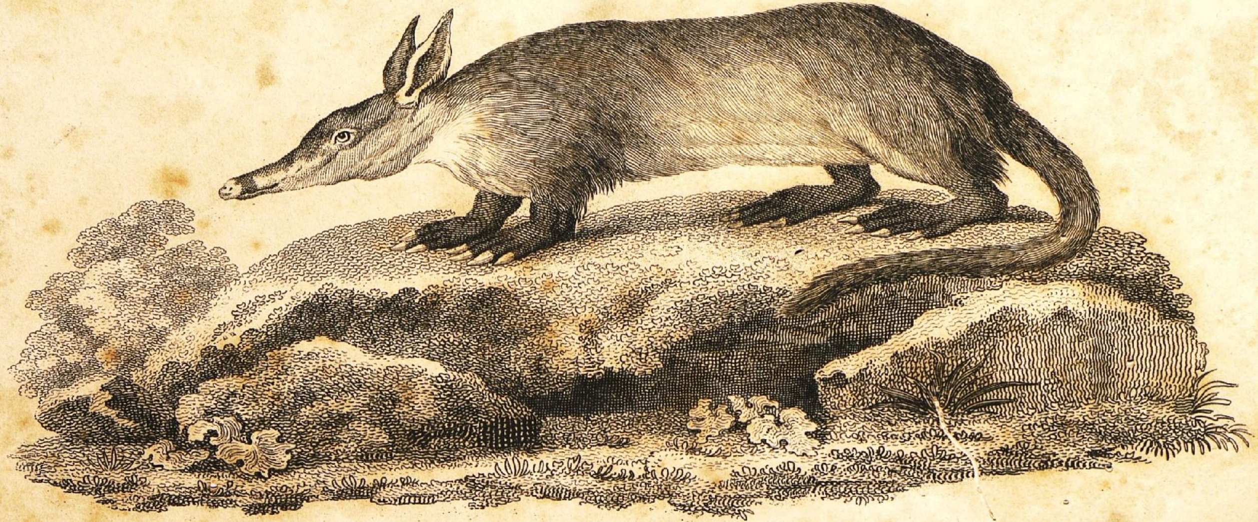
This is an animal of great elegance. It is not superior in size to a squirrel; measuring little more than seven inches from the nose to the tail, which is longer than the body and head: the head is small; the snout sharpened and slightly bent downwards: the legs are short; the fore feet have only two claws on each, the exterior one much larger and stronger than the interior: on each of the hind feet are four claws of moderate size: the ears are very small and hid in the fur: the eyes are also small. The whole animal is covered with a beautiful soft, and somewhat crisped or curled, fur, of a pale yellow-colour, or rather yellow-brown: the tail, which is very thick at the beginning or base, gradually tapers to the tip; and the lower surface, for about the space of four inches from the tip, is bare, the tail in this species being prehensile, and the animal commonly residing on trees, and preying on ants, by means of its long tongue, in the manner of other species. It is a native of Guiana. This species has been most elegantly figured both by Seba and Edwards; but the figure

Smith sculp.

LITTLE ANT-EATER,

Half the Natural Size.

London, Published by G. Kearsley, Fleet Street.



CAPE ANT-EATER.

Taylor sculp.

1800 Feb. 1 London Publish'd by G. Kearsley Fleet Street.

in the Natural History of the Count de Buffon is, by some mismanagement, so conducted as to give a very erroneous idea both of the habit of the animal and the structure of the feet. The representation in the present work is from a beautiful specimen in the Leverian Museum.

CAPE ANT-EATER.

Myrmecophaga Capensis. *M. palmis tetradactylis, rostro longo, auriculis magnis pendulis, cauda corpore breviore ad apicem attenuata. Lin. Syst. Nat. Gmel. p.* 53.

Ant-Eater, with four toes on the fore feet, long snout, large pendent ears, tail shorter than the body, and attenuated towards the tip.

Cochon de Terre. *Buff. suppl.* 6. *p.* 230. *pl.* 31.

Cape Ant-eater. *Pennant Quadr.* 2. *p.* 261.

The Count de Buffon, having formerly asserted that none of the South American animals were found in the continent of Africa, and that none of the African ones were to be found in South America, thinks proper, in his supplemental volume, to maintain his former dogma, and is not willing to consider this species as a genuine Ant-Eater, though it possesses the usual character, viz. mouth without teeth; of a long form; and a long retractile tongue.

The Cape Ant-Eater is a large animal, measuring about three feet and a half from the tip of the nose to the beginning of the tail; and the tail measures one foot nine inches. The general

colour of the animal is grey, or like that of a Rabbit, but deeper; and tinged with reddish on the sides and belly: the legs are blackish; the head is of a conic shape; the nose long, and somewhat abruptly blunt at the end like that of a hog: the tongue is very long, flat, and slender: the ears about six inches long; upright (in the dried specimen), and extremely thin: they are also thinly scattered over with fine hairs: the hair on the head and upper parts is short, and lies close or smooth as if glued to the skin; it is longest and loosest on the sides and legs: the tail is thick at the base, and gradually tapers to a point. The fore feet have four toes; the hind ones, five; and the claws on all the feet are very strong. This species inhabits the neighbourhood of the Cape of Good Hope, where it lives under ground, and is called by the name of the Ground Hog. It feeds principally on ants. It is said to be often hunted out of its retreats by the Hottentots, who consider it as a good food. The description of this animal is given by Mr. Allamand, from a dried skin sent from the Cape; and he observes, that it is doubtful whether the ears in the living animal are erect or pendent: in a fœtus described by Dr. Pallas*, they were pendent.

The animal mentioned by Kolbe, in his account of the Cape of Good Hope, seems extremely allied to this, except that it is expressly said to have pendent ears. It is said by Kolbe to be of the weight

* Pallas Miscell. Zool. 64.

ACULEATED ANT-EATER.

of an hundred pounds, and to have a long head and tongue: if it fastens its fore feet into the ground, the strongest man cannot pull it away: it has four claws on the fore feet; feeds on ants, and burrows under ground, coming out chiefly by night to feed.

So[illegible]ve been inclined to form a distinct genus from this species, under the title of *Orycteropus*; but this seems perfectly unnecessary, it being a genuine Myrmecophaga.

It is possible that the disputed figures in Seba, mentioned under the article Myrmecophaga tridactyla, may belong to this species.

ACULEATED ANT-EATER.

Myrmecophaga Aculeata. *M. aculeata, cauda brevissima. Vivarium Naturæ, tab.* 109.
Spiny Ant-Eater, with very short tail.
Porcupine Ant-Eater. *Naturalist's Miscellany, pl.* 109.
Aculeated Ant-Eater. *Pennant Quadr.* 2. *p.* 262.

The Aculeated Ant-Eater is one of those curious animals which have been lately discovered in the vast island, or rather continent, of Australasia or New Holland; and is a striking instance of that beautiful gradation, so frequently observed in the animal kingdon, by which creatures of one tribe or genus approach to those of a very different one. It forms a connecting link between the very distant Linnæan genera of Hystrix (Porcupine) and Myrmecophaga (Ant-Eater), having

the external coating and general appearance of the one, with the mouth and peculiar generic characters of the other. This animal, so far as may be judged from the specimens hitherto imported, is about a foot in length. The whole upper parts of the body and tail are thickly coated with strong and very sharp spines, of a considerable length, and perfectly resembling those of a Porcupine, except that they are thicker in proportion to their length; and that, instead of being encircled or annulated with several alternate rings of black and white, as in that animal, they are mostly of a yellowish white with black tips; the colour running down to some little distance on the quill, and being separated from the white part by a circle of dull orange: others have but a very slight appearance of black towards the tips. The head, legs, and whole under parts of the body, are of a deep brown, or sable, and are thickly coated with strong, close-set, bristly hair. The tail is extremely short, slightly flattened at the tip, and coated on the upper part of the base with spines, at least equal in length to those of the back, and pointing perpendicularly upwards. The snout is long and tubular, and perfectly resembles in structure that of the M. jubata, or Great Ant-Eater; having only a very small rictus or opening at the tip, from whence is protruded a long lumbriciform tongue, as in other Ant-Eaters. The nostrils are small, and seated at the extremity of the snout. The eyes are very small and black, with a pale blue iris. The legs are very short and

thick; and are each furnished with five rounded, broad toes: on the fore feet are five very strong, long, and blunt claws, of a black colour: on the hind feet are only four claws; the thumb, which is broader than the rest of the toes, being destitute of a claw: the first claw on the hind [illegible] extremely long, somewhat curved, and sharp pointed; the next rather shorter, but of similar appearance; the two remaining ones far shorter, very slightly curved, and not sharp-pointed. In its mode of life this animal resembles the rest of the Ant-Eaters, being generally found in the midst of some large ant-hill: it burrows with great strength and celerity under ground, when disturbed; its feet and legs being most excessively strong, and short, and wonderfully adapted to this purpose. It will even burrow under a pretty strong pavement, removing the stones with its claws; or under the bottom of a wall. During these exertions its body is stretched or lengthened to an uncommon degree, and appears very different from the short or plump aspect which it bears in its undisturbed state.

It cannot escape the observation of every scientific naturalist, that, in consequence of the discovery of this curious animal, the Linnæan character of Myrecophaga is, in part, rendered inapplicable. Since, therefore, the genera of *Manis* and *Myrmecophaga* differ only in the external covering. the former being coated with scales, and the latter with hair, it would, perhaps, be not improper to conjoin the two genera, to add this as a new spe-

cies, and to give as part of the generic character *Corpus pilis, squamis, vel aculeis tectum.* Or it might even constitute a new genus, which would differ from those of Manis and Myrmecophaga, in having the body covered with spines.

STRIPED ANT-EATER.

Myrmecophaga Striata. *M. flavescens, fusco transversim fasciata, maxilla superiore longiore.*

Yellowish Ant-Eater, with transverse dusky bands, and the upper jaw longer than the lower.

Le Tamandua. *Buff. suppl. 3. p. 381. pl. 56.*

Striped Ant-Eater. *Pennant Quadr. 2. p. 259.*

This is figured in the 3d vol. of the supplement to the Count de Buffon's Quadrupeds; and appears to be clearly a distinct species from any of the former. The nose is taper; the upper mandible extending very far beyond the lower: the eyes extremely small: the ears round and short: the tail covered with long hairs, so as to have a slightly bushy appearance: on the fore feet are five toes. The body and tail are of a yellowish-brown or tawny-colour; with the under parts white: the body is marked with broad, distant, blackish, transverse stripes, and the tail is annulated with similar ones. The length of the specimen, from nose to tail, was thirteen French inches; of the tail seven inches and a half. It is a native of Guiana.

MANIS.

Generic Character.

Dentes nulli.	*Teeth*, none.
Lingua teres, extensilis.	*Tongue* cylindric and extensile.
Os angustatum in rostrum.	*Mouth* narrowed into a snout.
Corpus squamis tectum.	*Body* covered with scales.

THE genus Manis presents an appearance not less extraordinary than that of Dasypus or Armadillo; being covered on every part, except on the belly, with extremely strong and large horny scales, constituting a suit of armour still more powerful than in the following genus, and capable of defending the animals, when rolled up, from the assaults of the most ferocious enemies. This external covering, together with the uncommon length of body and tail, gives an aspect so much resembling that of a Lizard, that these creatures are commonly known by the title of Scaly Lizards, though no otherwise allied to the Lizard tribe than in their unusual covering: they may be allowed, however, in a general view of the animal kingdom, to form a kind of shade or link of approximation between the proper viviparous quadrupeds and the Lizards.

They are animals of a harmless nature, and feed in the same manner as the Ant-Eaters, by thrusting out their very long tongue into the nests of ants and other insects, and swallowing their prey by suddenly retracting it, having no teeth, and differing from the Ant-Eaters in scarce any other circumstance but that of their scaly integument. They are found in India and the Indian islands.

LONG-TAILED MANIS.

Manis pedibus tetradactylis, cauda longissima.
Manis with four-toed feet and very long tail.
Manis Tetradactyla. *M. pedibus tetradactylis. Lin. Syst. Nat. p.* 53.
Lacerta indica guanæ congener. *Aldr. ovip. dig.* 668.
Scaly Lizard. *Grew's Rarities, p.* 46.
Le Phatagin. *Buff.* 10. *p.* 180. *pl.* 34.
Four-toed Manis. *Naturalists' Miscellany, pl.* 36.
Long-tailed Manis. *Pennant Quadr.* 2. *p.* 252.

This animal, known in India by the name of the Phatagen, is of a very long and slender form: the head is small; the snout narrow: the whole body, except beneath, covered with broad, but sharp-pointed scales, which are striated throughout their whole length: the tail is more than twice the length of the body, and tapers gradually to the tip. The legs are very short; scaled like the body, and on each of the feet are four claws, of which those on the fore feet are stronger than

55.

LONG-TAILED MANIS.

Heath sculp.

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SHORT-TAILED MANIS.

Heath sculp.

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those of the hind. The colour of the whole animal is an uniform deep brown, with a cast of yellowish, and with a glossy or polished surface. The Manis tetradactyla grows to the length of five feet, measuring from the tip of the nose to the extremity of the tail.

SHORT-TAILED MANIS.

Manis pedibus pentadactylis, cauda corporis longitudine.
Manis with five-toed feet, and tail the length of the body.
Manis Pentadactyla. *M. pedibus pentadactylis. Lin. Syst. Nat. p.* 52.
Lacertus indicus squamosus. *Bont. Jav. p.* 60.
Pangolin. *Buff.* 10. *pl.* 34.
Five-toed Manis. *Naturalists' Miscellany, pl.* 11.
Short-tailed Manis. *Pennant Quadr. p.* 253.

This species differs from the former, in being of a much thicker and shorter form: the tail, in particular, differs greatly in proportion from that of the preceding, being not so long as the body; very thick at the base, and from thence gradually tapering, but terminating very obtusely. The head is small as in the former; the ears small and rounded: the feet furnished with five toes each, of which those on the fore feet are extremely strong, except the exterior one, which is much smaller than the rest. The whole animal is covered with most extremely thick, strong, and large scales, which in the full-grown speci-

mens are perfectly smooth, but in those which are smaller are slightly striated about half-way from the base. Sometimes a few bristles appear between the scales, but in others this is not observable. The scales differ in shape from those of the preceding, being much wider and larger in proportion to the body and tail. The colour of the whole animal is a very pale yellow-brown, and the surface is glossy, as in the former species. In India it is called the Pangoelling. In the neighbourhood of Bengal it is named Vajracite, or the Thunderbolt Reptile, from the excessive hardness of the scales, which are said to be capable even of striking fire like a flint. It is found in different parts of India, and perhaps also in Guinea; this is on the authority of *Des Marchois*, who says it is called *Quogelo* by the negroes; that it grows to the length of eight feet, of which the tail is four; that it lives in woods and marshy places, and feeds on ants, by laying its long tongue across their paths. It is said to walk slowly; but, when pursued, rolls itself up, and is then so securely armed that even a leopard attacks it in vain. It is also said sometimes to destroy the elephant, by twisting itself round the trunk, and thus compressing that tender and sensible organ with its hard scales. We are told in the Asiatic Researches, that the Malabar name of this animal is Alungu; and that the natives of Bahar call it Bajar-cit, or the Stone vermin; and in the stomach of the one examined and described

in the above work was found about a teacupful of small stones, which it is supposed to have swallowed for the purpose of facilitating digestion. It was only thirty-four inches long from the nose to the end of the tail; and a young one was found in it.

The figure given in the Asiatic Researches is considered as a variety, differing a little in the proportion of some of its measurements from that described by the Count de Buffon, &c. In reality, it should seem to be the variety slightly described and figured in the Philosophical Transactions; and which Mr. Pennant has introduced into the last edition of his History of Quadrupeds as a distinct species, under the title of the *Broad-tailed Manis.* This we shall, in compliance with that excellent zoologist, describe in a separate article, though we think it may be doubted whether it should be really considered as a distinct species. Specimens of the Manis pentadactyla have sometimes been seen of the length of six feet from the nose to the tip of the tail.

BROAD-TAILED MANIS.

Manis cauda latissima.
Manis with extremely broad tail.
Broad-tailed Manis. *Pennant Quadr.* 2. *p.* 254.
New Manis. *Phil. Trans.* 60. *p.* 36. *pl.* 11.

THIS animal is figured in the 60th volume of the Philosophical Transactions: it was killed in

the house of a merchant at Tranquebar, having been discovered in the cavity of a wall. When pursued, it rolled itself up in such a manner as to leave only the back and tail visible. It was with great difficulty destroyed. It had five toes on the fore feet, and four on the hind: the scales were of the shape of a muscle; the belly quite smooth; the exterior scales ended in a sharp point, somewhat incurvated: the tail was very broad, decreasing to a point: the whole length of the animal was a German ell and five eighths: the tail half an ell and a span broad in the broadest part.

Of animals inhabiting regions so remote, it is impossible to obtain more than a partial intelligence as to the exact distinction of species, sex, and variety: we must, therefore, be content to remain in doubt whether the above-described animal, as well that mentioned in the Asiatic Researches, should be considered as distinct from the species already known or not.

In reality, however, these differences do not seem sufficient to constitute a specific distinction; and are, probably, owing to the differences of age and sex. In the British Museum are specimens of different sizes, which shew these gradations. In one the scales, all over the animal, are so regularly and completely truncated at the extremity, as to exhibit the appearance of so many hexagons. In another they are remarkably broad and rounded; and, in a third, which is a very

large specimen, they are less obtuse at the tips, and somewhat irregularly terminated, as if notched, or worn through age. The proportional breadth of the tail also varies somewhat in these specimens, and seems greatest in those which are least advanced in age.

DASYPUS. ARMADILLO.

Generic Character.

Dentes molares plures, absque primoribus, absque laniariis.	*Grinders* several, without either cutting or canine teeth.
Corpus cataphractum testa ossea zonis intersecta.	*Body* coated with a shelly armour, divided into zones.

THE Armadillos are natives of South America, and are readily distinguished from all other Quadrupeds by the singular covering with which Nature has ornamented them; and which forms a complete suit of armour, divided into bands or shelly zones, in such a manner as to accommodate itself to the various postures of the body; and exhibiting a most beautiful example of deviation from the general structure and appearance in quadrupeds. The Armadillos are innoxious animals, and inhabit subterraneous retreats or burrows, which they readily excavate by means of their large and strong claws. They wander about chiefly by night, and devour various roots and grain; and are, therefore, considered as injurious to plantations. They also occasionally prey on the smaller animals of different kinds; worms, insects,

&c. In a state of captivity they readily eat animal food, and that in considerable quantity.

They are themselves considered as excellent food, and are, therefore, dug out of their subterraneous cavities, and sold for the table. When old, however, their flesh acquires a strong musky scent, and becomes unfit for use. When attacked, the Armadillos roll themselves up into the form of a ball, and thus become, in a degree, invulnerable. Nothing can exceed the curious mechanism by which this is performed; nor is it possible to view without admiration the appearance of the animal thus coiled up, and secured from common contingencies.

Armadillos are said to drink frequently, and they often grow extremely fat. They are very prolific animals, and are said to breed three or four times a year, and to bring several young at a birth. The species are determined by the number of shelly zones on the body. In enumerating these, however, it is remarkable that most authors vary; and the exact discrimination of all the species seems yet a desideratum in natural history. This, perhaps, arises partly from the inattention of draughtsmen and engravers, when representing the animals, and partly from different authors counting differently the bands on some of the species; which are so placed as to make it difficult, in some instances, to distinguish the ultimate or bounding zones of the body, from the scaly divisions on the fore and hind parts of the animal, and which, like the bands, are disposed into a

kind of zones, though less strongly marked. Some species, however, are so clearly defined by this mode of distinction, as to be at all times readily ascertained.

THREE-BANDED ARMADILLO.

Dasypus Tricinctus. *D. tegmine tripartito, pedibus pentadactylis. Lin. Syst. Nat. p.* 53.

Armadillo, with the armour divided into three bands, and five-toed feet.

Tatou, v. Armadillo. *Red. exper.* 91. *t.* 92.

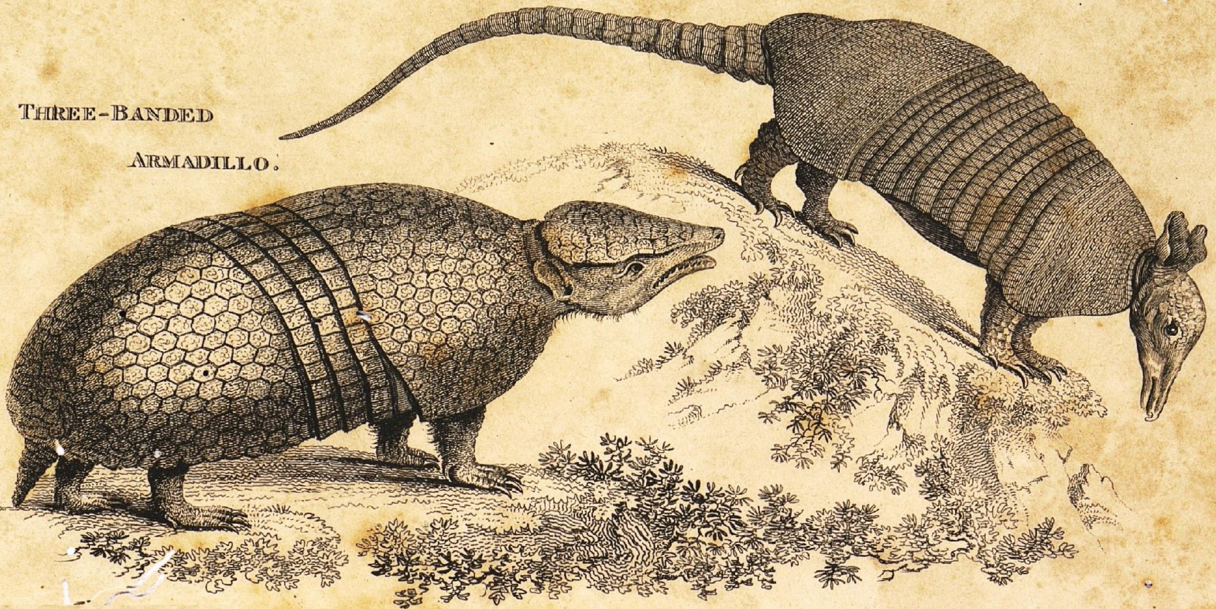
Tatu apara. *Marcgr. bras.* 232.

Tatu, &c. *Seb.* 1. *p.* 62. *t.* 38. *f.* 2, 3.

THIS may be considered, perhaps, as the most elegant of the whole genus; the pattern of the armour being peculiarly neat, and well defined; and the colour of the animal more pleasing than in most other species, viz. a clear yellowish-white. The head, shoulders, and hind part of the body, are coated with regular hexagonal divisions, curiously studded or tuberculated on the surface; and the zones of the body are extremely distinct, and only three in number: they are divided or marked into numerous transverse segments or squares; the tail is very thick and short. The legs are covered with hexagonal divisions or segments similar to those on the shoulder, but smaller: the ears are rather large, and the claws smaller than in most other species: it is a native of Brazil.

NINE-BANDED ARMADILLO.

THREE-BANDED ARMADILLO.



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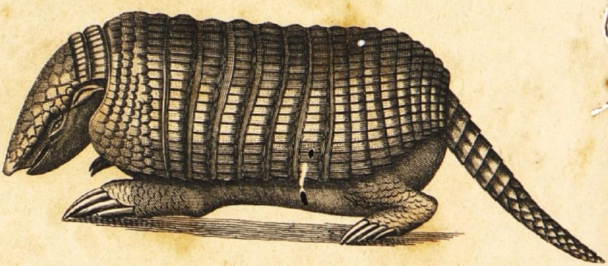
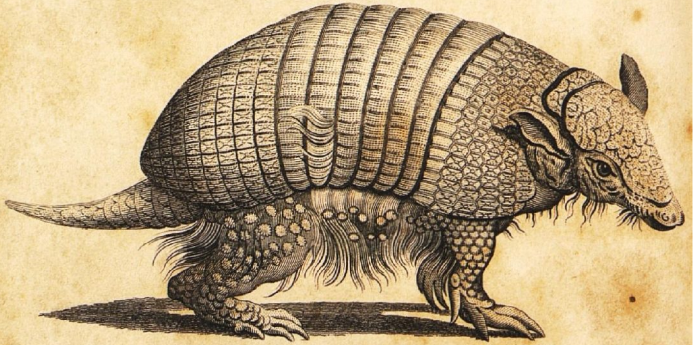
Heath sculp.



EIGHTEEN-BANDED-ARMADILLO.



SIX-BANDED ARMADILLO.

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Heath sculp.

SIX-BANDED ARMADILLO.

Dasypus Sexcinctus. *D. cingulis senis, pedibus pentadactylis. Lin. Syst. Nat. p.* 54.
Armadillo with six bands, and five-toed feet.
Tatu, v. Armadillo prima Marcgravii. *Raj. Quadr.* 233.
Armadillo. *Olear. mus. p. 7. t. 6. f.* 4.
Encoubert, ou Tatou à six bandes. *Buff.* 10. *p.* 209. *pl.* 42. *and suppl.* 3. *p.* 285. *pl.* 57.

This is also a species of great elegance; and, in its general appearance, much resembles the former; but is furnished with six bands instead of three: the tail is very thick at the base, and is short in proportion to the animal; the claws are very large and strong. The bands are marked into oblong squares, as in the former.

VAR.

This animal appears to vary as to the number of its bands: the specimens both in the British and Leverian Museums having eight bands instead of six; in all other respects they agree with the six-banded one. A particular character of this species seems to be the remarkable breadth and flatness of the head, which is larger in proportion than in others of the genus. The Leverian eight-banded variety is of a very fair yellowish-white: that in the British Museum is of a much deeper colour, approaching to an iron-grey, but whitish in some parts.

SEVEN-BANDED ARMADILLO.

Dasypus Septemcinctus. *D. cingulis septenis, palmis tetradactylis, plantis pentadactylis. Lin. Am. Acad.* I. *p.* 281. *Syst. Nat. p.* 54.
Armadillo with seven bands, and four toes on the fore feet, and five on the hind.

It is impossible to consider this in any other light than as a mere variety of the nine-banded Armadillo, in which the pattern of the armour, and the relative proportions of the parts, are sufficient to ascertain the species, whatever may happen to be the number of the zones.

NINE-BANDED ARMADILLO.

Dasypus Novemcinctus. *D. cingulis novem, palmis tetradactylis, plantis pentadactylis. Lin. Syst. Nat. p.* 54.
Armadillo with nine zones, four toes on the fore feet, and five on the hind.
Cataphractus scutis duobus, cingulis novem. *Briss. Quadr.* 42.
Tatus. *Gesn. Quadr. p.* 935.
Cachicame, ou Tatou à neuf bandes. *Buff.* 10. *p.* 215. *pl.* 37.
Nine-banded Armadillo. *Pennant Quadr.* 2. *p.* 248.

The number of bands or zones in this species is generally nine: they are extremely distinct or well defined, and are transversly marked by very numerous wedge-shaped or acutely-triangular figures alternating with smaller opposite ones: the head is smaller, longer in proportion, and sharper snouted than in any other species: the fore and hind parts of the shield or covering are marked by very nu-

merous flat, rounded scales or tubercles, with smaller ones interposed: the ears are moderately large, and upright; the tail is longer than in any other species, and tapers gradually to the tip. It is marked by transverse rows of longish hexagonal divisions on each joint: on the fore feet are four toes, and five on the hind: the claws moderately large and strong.

VAR.

Though this species preserves, in general, its specific character of *nine bands;* yet this is not always to be depended on, since specimens sometimes occur in which only *eight* bands are visible. A specimen of this kind occurs in the British Museum; and the Count de Buffon assures us, that he has observed two specimens with eight bands only, which in every other respect perfectly resembled the nine-banded ones. He is, therefore, of opinion (and in this we clearly agree with him), that the number of bands, in this species, constitutes not a specific, but a sexual difference: the eight-banded one he supposes to be the male. The general colour of this species is a palish iron-grey; but specimens often occur in Museums of a yellowish-brown cast, having probably lost a part of their original tinge. The scales on the anterior and hinder parts are also sometimes of an angular form instead of round.

The young specimens of this animal also exhibit a difference as to the pattern or marking of

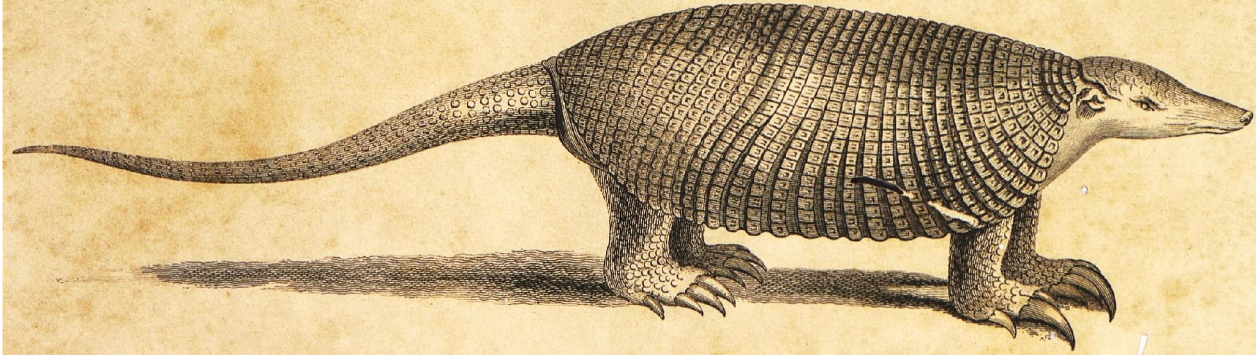
the bands; which, instead of the triangular or wedge shaped marks before described, have a simple series of long-oval marks throughout each band; and the ultimate bands are not so distinctly defined as in the adult animal.

The *Seven-banded Armadillo*, *Dasypus septemcinctus*, of Linnæus and others, as before observed, is not a distinct species, but a mere variety of this; as is also the *Eight-banded Armadillo*, *Dasypus octocinctus*. Lin. Syst. Nat. Gmel.

TWELVE-BANDED ARMADILLO.

Dasypus cingulis duodecim.
Armadillo with twelve zones.
Dasypus Unicinctus. *Lin.* *D. tegmine tripartito, cingulis duodecim.* *Lin. Syst. Nat. p.* 53.
Tatu seu Armadillo Africanus. *Seb.* 1. *p.* 57. *t.* 30.
Kabassou ou Tatou a douze bandes. *Buff.* 10. *p.* 218. *pl.* 40. *and var.? major, pl.* 41.
Twelve-banded Armadillo. *Pennant Quadr.* 2. *p.* 249.

The Twelve-banded Armadillo, according to the character generally given in authors, should have twelve zones or bands; but it is certain that this number is not very accurately observed by Nature: and perhaps thirteen or fourteen is the more general number. The individuals also appear to vary in some other particulars. That described by the Count de Buffon and Mr. Pennant, under the title of the Twelve-banded Armadillo, has broad upright ears; the head is thick and broad, and is marked above into large



GREATER TWELVE-BANDED ARMADILLO.

1800. Feb. 1. London Publish'd by G. Kearsley Fleet Street.

White sculp.

angular divisions; the crust on the shoulders into oblong pieces inclining to a squarish form: that on the rump into hexagonal ones; (the Count de Buffon describes them as square, though hexagonal in the figure): the fore feet have five toes, with very large and strong claws: the hind feet have the same number, but smaller: the tail is somewhat shorter than the body; and is said by Buffon to have no crustaceous* covering; differing, in that respect, from every other species: his figure represents it covered with roundish tubercles. The length of this animal, from the nose to the tail, is about a foot; the tail about seven inches, or less.

Var.?

GREATER TWELVE-BANDED ARMADILLO.

This, which is by far the largest of all the Armadillos, differs from the former in the pattern of the shield on the interior and hinder part of the body; all the divisions consisting of oblong squares: the tail also differs, being longer than the body. The measures of the specimen described and figured by Buffon, are thus given,

* By this, however, we are by no means to understand that the tail is merely covered by skin; on the contrary, it is guarded by scaly tubercles, which secure it almost as strongly as the armour on that of other species; and, indeed, the chief difference is, that these strong tubercles are not, strictly speaking, set in jointed rings, but scattered.

viz. from nose to tail two feet ten inches, and the tail about one foot eight inches. This, Mr. Pennant says, is the largest he ever heard of: in the British Museum, however, is a specimen of exactly similar dimensions, and which is accurately represented on the annexed plate. The head is rather small than large; and the snout is sharpish: the ears small and sharp: the claws excessively large and strong. The bands, which are thirteen in number, are scarce distinguishable from the rest of the armour, which both before and behind is marked out into narrow zones, divided into numerous oblong squares: these bands on the fore part of the animal are narrower or more closely set than on the hind part, and the whole exactly agrees with Buffon's figure entitled Autre Kabassou (vol. 10. pl. 41.) The colour of the whole animal is a pale yellowish-grey.

The figures given in plate 30. vol. 1. of Seba, seem to be young ones, and consequently do not exhibit with sufficient distinctness some of the characters: their heads seem remarkably thick or blunt; and the tail of one of them is represented as perfectly void of any covering; of the other covered with square scaly divisions: the ears in both very large.

EIGHTEEN-BANDED ARMADILLO.

Dasypus 18-cinctus. *D. cingulis octodecim.*
Armadillo with eighteen zones.
Dasypus cingulo simplici. *Lin. Syst. Nat. Gmel. p.* 55.
Weezle-headed Armadillo. *Grew. mus. reg. soc. p.* 19. *t.* 1.
Cirquincon, ou Tatou à dix-huit bandes. *Buff.* 10. *p.* 220.
Eighteen-banded Armadillo. *Pennant Quadr.* 2. *p.* 250.

THIS was first described by Grew, in the last century, under the name of the Weezle-headed Armadillo. The description was composed from a specimen in the Museum of the Royal Society, and is as follows:

"His head in figure almost like a Weezle's, whence I take leave for his name. It is three inches and a half long; his forehead two inches and a half broad, and very flat; the end of his nose half an inch. His eyes small, a quarter of an inch long. His ears two inches distant one from another; an inch long. His body or trunk eleven inches long, about six broad. His tail five inches and a half long; near the buttocks an inch and a quarter over; the extremity the fifth of an inch. His fore leg two inches and a half long, three quarters broad; on which there are five toes; whereof the three foremost are an inch long, the other two half an inch: all with claws the third of an inch. On his hinder foot (which is somewhat bigger) he hath also five toes, as in the foremost. His head, back, sides, legs, and tail, are covered with a shelly armour. His

head-piece, as also the shells on his legs, are composed of roundish scales, a quarter of an inch over. His neck-piece is a single plate, composed of little pieces, a quarter of an inch square. His shoulder-piece consisteth of several ranks or rows of such-like square pieces, but not set together by any articulation or moveable conjunction. His back-piece, reaching also over his buttocks to his tail, is composed of several plates, in number eighteen, moveably joined together by as many intermediate skins. The foremost and greatest of these plates consist of square pieces, half an inch long, and a quarter broad. The hindermost, of square and round ones together. The extreme part of the shell, next the tail, is parabolic. The fore part of the tail is surrounded with six rings; consisting of little square pieces. The other half with scales. His breast, belly, and ears, all naked."

This species seems most allied to the Twelve-banded Armadillo. It appears not to have been figured by any author except Grew, whose representation is far from elegant, but which, for the satisfaction of the reader, it was thought proper to introduce.

The name *unicinctus*, applied, as a trivial, by Linnæus, must be confessed to be not very proper; since it seems to imply a simple or undivided zone on the animal, instead of eighteen.

The following are clearly no other than varieties, viz. the *Seven-banded of Linnæus*, Am. Acad.

vol. The *Sexcinctus, pl. 72. of Schreber*, and the *Octocinctus, pl. 73. of the same author.* All three being varieties of the *Novemcinctus*, or Nine-banded Armadillo.

The Cheloniscus of Columna, aquat. 2. p. 15. t. 16. seems to be no other than a variety of the Three-banded, or *Tricinctus.*

The Four-banded Armadillo of Molina, mentioned in his Natural History of Chili, may perhaps be a distinct species. Molina also mentions an Armadillo with eleven bands, with four toes on the fore feet and five on the hind.

RHINOCEROS.

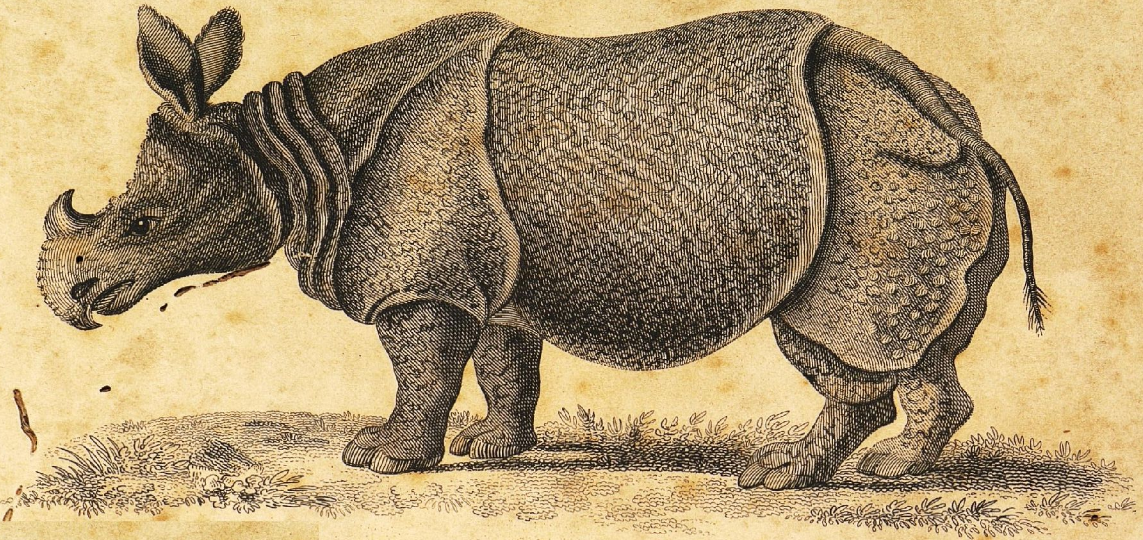
Generic Character.

Cornu solidum, perenne, conicum, naso insidens.	*Horn* solid, perennial, conical, feated on the nofe.

SINGLE-HORNED RHINOCEROS.

Rhinoceros Unicornis. *R. cornu unico. Lin. Syst. Nat. Gmel. p.* 57.
Rhinoceros with a single horn.
Rhinoceros. *Parsons Phil. Trans. vol.* 42.
Buff. 11. *p.* 174. *pl.* 7.
Edwards, pl. 221.

THE Rhinoceros is the largest of land animals, the Elephant alone excepted. It is of a highly uncouth and awkward form. The back, instead of rising, as in the Elephant, sinks in considerably: the head is moderately large and long: the upper lip protrudes or hangs over the lower in the form of a lengthened tip; and, being extremely pliable, answers the end of a small proboscis; and is useful to the animal in catching hold of the shoots of vegetables, &c. and delivering them into the mouth. On the nose is situated a very



SINGLE-HORNED RHINOCEROS.

1800. Feb'y 1. London. Publish'd by G. Kearsley, Fleet Street.

eath sculp.

strong, slightly curved, sharp-pointed horn, which, in the full-grown animal, is sometimes three feet in length, and eighteen inches in circumference at the base. The mouth has four cutting-teeth, which are placed at each corner of each jaw: there are also six grinders in each jaw; of which the first is remote from the cutting-teeth. (In strict propriety it may be doubted whether the four teeth first mentioned should be called by the title of cutting-teeth.) The ears are moderately large, upright, and pointed: the eyes small: the skin naked, rough, and tuberculated, or marked with very numerous, large, callous granulations: it is destitute of hair, except a few straggling and very coarse bristles on some parts of the head, &c. About the neck the skin is disposed into several large plaits or folds: another fold of the same kind passes from the shoulders to the fore legs; and another from the hind part of the back to the thighs: the tail is slender, flattened at the end, and covered on the sides with very stiff and thick black hairs: the belly is somewhat pendulous, or shaped like that of a hog: the legs very short, strong, and thick: the feet marked into three large hoofs, all standing forwards. The general height of the Rhinoceros is about eight feet; but it is said that some have been seen in Sumatra and Java which nearly equalled the size of the Elephant; though they appeared lower, on account of the sinking back; the pendulous abdomen, and short legs.

The Rhinoceros is a native of several parts of

India, as well as of the islands of Java, Sumatra, &c. This animal falls far short of the Elephant in sagacity and docility. It is, however, of a quiet and inoffensive disposition, but very furious and dangerous when provoked or attacked; he is said to run with great swiftness, and, from his strength and impenetrable covering, is capable of rushing with resistless violence through woods and obstacles of every kind; the trees bending like twigs while he passes between them. In general habits and manner of feeding the Rhinoceros resembles the Elephant; residing in cool sequestered spots, near waters, and in shady woods: it delights in rolling occasionally in the mud, in the manner of a hog. Its skin is so hard as to be impenetrable by any common weapons, except on the belly: it is even said, that, in order to shoot a full-grown Rhinoceros of advanced age, it is necessary to make use of iron bullets; those of lead having been known to be flattened against the skin.

The bones of the Rhinoceros, like those of the Elephant, are often found in a fossil state in various parts of the world; and in the year 1772 an entire Rhinoceros was found buried in the banks of a Siberian river, in the ancient frozen soil, with the skin, tendons, and some of the flesh, in the highest state of preservation. It was discovered in the sandy banks of the river Witim, which falls into the Lena, below Jakutsk, in N. lat. 64. A full account of this curious discovery is given by Dr. Pallas, in the 17th vol. of the Petersburgh Transactions.

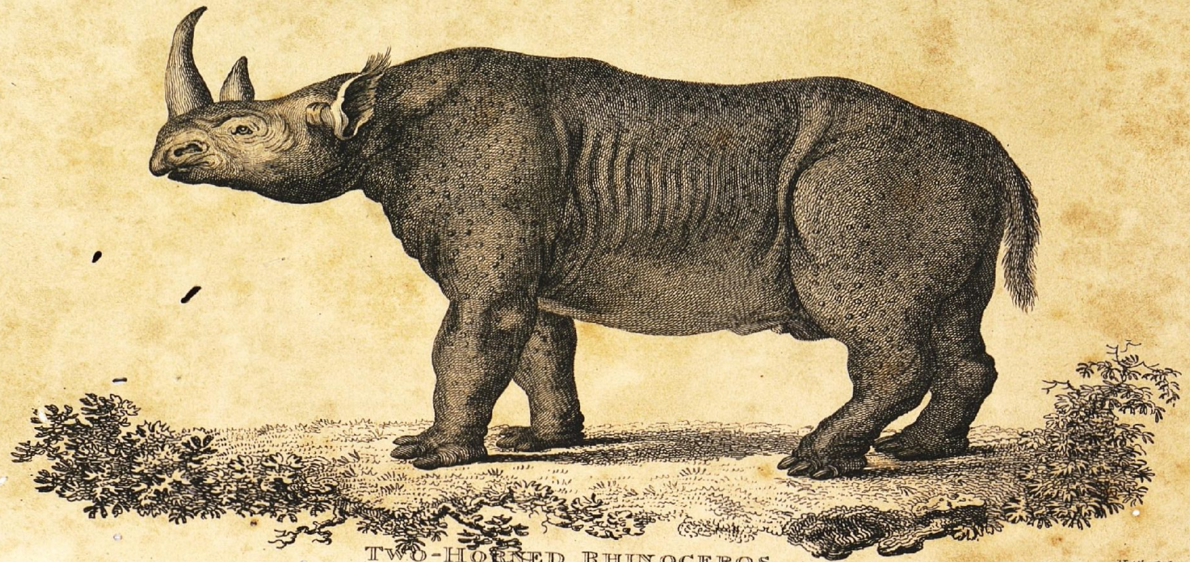
The first specimen of the common or Indian Rhinoceros ever imported into Europe since the time of the Romans, is supposed to have been that which was presented to Emanuel, king of Portugal, in the year 1513. It gave rise to the first figure of the Rhinoceros by Albert Durer; but it is concluded, and not without good reason, that he never saw the animal himself, but received from some correspondent the drawing from which he executed his figure, which evidently appears to have been decorated with fictitious folds, plaits, scales, and scollopings, and, besides the horn on the nose, has a smaller one situated on the back of the neck. This figure of Albert Durer's has been frequently copied in works on natural history, and occurs in Gesner, Aldrovandus, &c. &c. The other figures of the Rhinoceros, afterwards published, though free from Albert Durer's errors, were still faulty; and it was not till the year 1743 that a faithful representation of this animal was presented to the public. This appeared in the Philosophical Transactions, and the figure was executed under the superintendance of Dr. Parsons, an excellent zoologist of that period. The celebrated Edwards also, in the first volume of his "Gleanings of Natural History," published a beautiful representation of the same specimen. The animal, however, was but young, and the horn, of course, but in its first approach towards elongation. The figure in the Count de Buffon's Natural History seems to have been the next authentic representation, and appears to have been some-

what more advanced in age than that figured by Edwards and Dr. Parsons.

TWO-HORNED RHINOCEROS.

Rhinoceros Bicornis. *R. cornubus duobus. Lin. Syst. Nat. Gmel. p.* 57.
Rhinoceros with two horns.
Sparmann act. Holm. 1778.
Two-horned Rhinoceros. *Pennant Quadr.* 1. *p.* 150. *Buff. suppl.* 6. *pl.* 6.

THIS species is found in various parts of Africa, and seems to have been the kind which was known to the ancient Romans, and by them exhibited in their public shows and combats of animals. In size it equals the common or single-horned species; and its habits and manner of feeding are the same: but it differs greatly in the appearance of its skin, which, instead of the vast and regularly marked armour-like folds of the former, has merely a very slight wrinkle across the shoulders, and on the hinder parts, with a few fainter wrinkles on the sides, so that, in comparison with the common Rhinoceros, it appears almost smooth: the skin, however, is rough or tuberculated, especially in the larger specimens: but what constitutes the specific or principal distinction is, that the nose is furnished with two horns, one of which is smaller than the other, and situated above it, or higher up on the front. These horns are said to be loose when the animal is in a quiet state,



TWO-HORNED RHINOCEROS.

Heath sculp.

1800. Feb.y 1 Publish'd by G. Kearsley, Fleet Street.

but to become firm and immoveable when it is enraged. This observation is confirmed by Dr. Sparman, who observed, in a specimen which he shot in Africa, that they were fixed to the nose by a strong apparatus of muscles and tendons, so as to allow the animal the power of giving them a steady fixture on proper occasions. This, indeed, is treated by Mr. Bruce, the celebrated Abyssinian traveller, as an absurd idea; but, on inspecting the horns and skin on which they are seated, it does not appear that they are firmly attached to or connected with the bone of the cranium.

Mr. Bruce is also of opinion that the common or Single-horned Rhinoceros is found in many parts of Africa, as well as in Asia; and in this there surely seems no improbability.

The figure of the two-horned species in Mr. Pennant's History of Quadrupeds seems to represent the whole animal scaly; the roughness of the skin being probably somewhat too harshly expressed in the engraving.

That in the supplement to Buffon, vol. 6. pl. 6. is a much superior representation.

The figure of the Two-horned Rhinoceros, in Mr. Bruce's travels, is unquestionably a copy of Buffon's representation of the common Rhinoceros, with the addition of a second horn. Whether this was done merely to save trouble, or whether the specimen seen by Mr. Bruce had really the same kind of folds and roughnesses on its skin as the common species, or, lastly, whether it was

a real variety of that animal, it is not easy to determine; but the latter seems the most favourable construction, and (if we allow that species to be found in Africa) is by no means an improbable supposition; since all other travellers, who have seen and described the two-horned species, agree in affirming that the very strong plaits and armour-like appearance of the skin, which so strikingly distinguish the common Rhinoceros, are not visible, or, at least, but very obscurely visible, in the two-horned species.

Mr. Bruce's description of the manner of feeding, as well as of some other particulars relative to the Two-horned Rhinoceros, seems highly worthy of notice. He informs us, that, "besides the trees capable of most resistance, there are, in the vast forests within the rains, trees of a softer consistence, and of a very succulent quality, which seem to be destined for his principal food. For the purpose of gaining the highest branches of these, his upper lip is capable of being lengthened out so as to increase his power of laying hold with this in the same manner as the Elephant does with his trunk. With this lip, and the assistance of his tongue, he pulls down the upper branches which have most leaves, and these he devours first; having stript the tree of its branches, he does not therefore abandon it, but, placing his snout as low in the trunk as he finds his horns will enter, he rips up the body of the tree, and reduces it to thin pieces, like so many laths; and when he has thus prepared it, he embraces as much of it

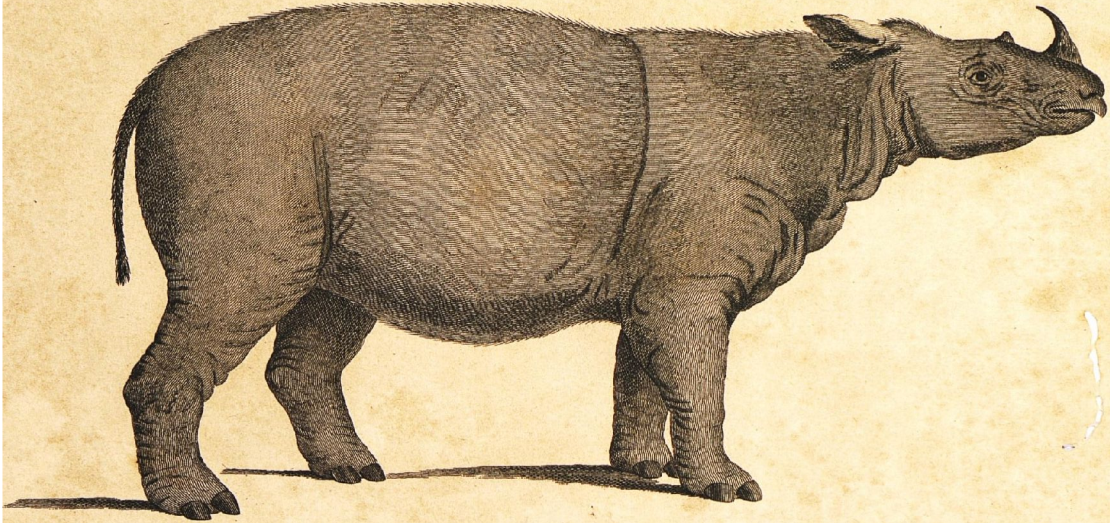
as he can in his monstrous jaws, and twists it round with as much ease as an ox would do a root of celery, or any such pot-herb or garden-stuff.

"When pursued, and in fear, he possesses an astonishing degree of swiftness, considering his size, the apparent unwieldiness of his body, his great weight before, and the shortness of his legs. He is long, and has a kind of trot, which, after a few minutes, increases in a great proportion, and takes in a great distance; but this is to be understood with a degree of moderation. It is not true, that in a plain he beats the horse in swiftness. I have passed him with ease, and seen many worse mounted do the same, and though it is certainly true that a horse can very seldom come up with him, this is owing to his cunning, but not his swiftness. He makes constantly from wood to wood, and forces himself into the thickest part of them. The trees that are frush, or dry, are broke down, like as with a cannon shot, and fall behind him and on his side in all directions. Others that are more pliable, greener, or fuller of sap, are bent back by his weight and velocity of his motions. And, after he has passed, restoring themselves like a green branch to their natural position, they sweep the incautious pursuer and his horse from the ground, and dash them in pieces against the surrounding trees.

"The eyes of the Rhinoceros are very small, and he seldom turns his head, and, therefore, sees nothing but what is before him. To this he

owes his death, and never escapes if there is so much plain as to enable the horse to get before him. His pride and fury, then, make him lay aside all thoughts of escaping, but by victory over his enemy. He stands for a moment at bay, then, at a start, runs straight forward at the horse, like the wild boar, whom, in his manner of action, he very much resembles. The horse easily avoids him, by turning short to aside; and this is the fatal instant: the naked man, with the sword, drops from behind the principal horseman, and, unseen by the Rhinoceros, who is seeking his enemy, the horse, he gives him a stroke across the tendon of the heel, which renders him incapable of further flight or resistance.

"In speaking of the great quantity of food necessary to support this enormous mass, we must likewise consider the vast quantity of water which he needs. No country but that of the Shangalla, which he possesses, deluged with six months' rain, and full of large and deep basons, made in the living rock, and shaded by dark woods from evaporation, or watered by large and deep rivers, which never fall low or to a state of dryness, can supply the vast draughts of this monstrous creature: but it is not for drinking alone that he frequents wet and marshy places; large, fierce, and strong as he is, he must submit to prepare himself against the weakest of all adversaries. The great consumption he constantly makes of food and water necessarily confine him to certain limited spaces; for it is not every place that can maintain



SUMATRAN RHINOCEROS. *from the Phil. Trans.*

Heath sc.

1800. Febʳʸ 1. London Publish'd by G. Kearsley Fleet Street.

him; he cannot emigrate, or seek his defence among the sands of Atbara."

The adversary just mentioned is a fly (probably of the genus Œstrus), which attacks the Rhinoceros, as well as the Camel and many other animals, and would, according to Mr. Bruce, as easily subdue him, but for the stratagem which he practises of rolling himself in the mud by night, by which means he clothes himself in a kind of case, which defends him from his adversary the following day. The pleasure that he receives from thus rolling in the mud, and the darkness of the night, deprive him of his usual vigilance and attention. The hunters steal secretly upon him, and while lying on the ground, wound him with their javelins; mostly in the belly, where the wound is mortal.

SUMATRAN RHINOCEROS.

In the Philosophical Transactions, for the year 1793, we also meet with a good figure of a Two-horned Rhinoceros, with an accurate description, by Mr. Bell, surgeon, who had resided some time in Sumatra. The specimen, however, which he describes, was but young, and probably far short of its full size.

"The shape of the animal was much like that of the hog. The general colour was a brownish-ash; under the belly, between the legs and folds of the skin, a dirty flesh-colour.

"The head much resembled that of the Single-horned Rhinoceros. The eyes were small, of a brown-colour; the *membrana nictitans* thick and strong.

"The skin surrounding the eyes was wrinkled. The nostrils were wide. The upper lip was pointed, and hanging over the under.

"There were six *molares*, or grinders, on each side of the upper and lower jaw, becoming gradually larger backward, particularly in the upper. Two teeth in the front of each jaw.

"The tongue was quite smooth.

"The ears were small and pointed, lined and edged with short black hair, and situated like those of the Single-horned Rhinoceros.

"The horns were black; the larger was placed immediately above the nose, pointing upwards, and was bent a little back: it was about nine inches long. The small horn was four inches long, of a pyramidal shape, flattened a little, and placed above the eyes, rather a little more forward, standing in a line with the larger horn, immediately above it. They were both firmly attached to the skull, nor was there any appearance of joint or muscles to move them.

"The neck was thick and short, the skin on the under side thrown into folds, and these folds again wrinkled.

"The body was bulky and round, and from the shoulder ran a line or fold, as in the Single-horned Rhinoceros, though it was but faintly

marked. There were several other folds and wrinkles on the body and legs; and the whole gave rather the appearance of softness.

"The legs were thick, short, and remarkably strong; the feet armed with three distinct hoofs, of a blackish-colour, which surrounded half the foot, one in front, the others on each side. The soles of the feet were convex, and of a light colour, and the cuticle on them not thicker than on the foot of a man who is used to walking.

"The whole skin of the animal is rough, and covered very thinly with short black hair. The skin was not more than one third of an inch in thickness, at the strongest part; under the belly it was hardly a quarter of an inch; any part of it might be cut through with ease by a common dissecting knife.

"The animal had not that appearance of armour which is observed in the Single-horned Rhinoceros.

"Since I dissected the male, I have had an opportunity of examining a female, which was more of a lead-colour: it was younger than the male, and had not so many folds or wrinkles in its skin; of course it had still less the appearance of armour."

The height of the first of these specimens, or the male, was, according to Mr. Bell, four feet four inches at the shoulder; nearly the same at the rump; and eight feet five inches from the tip of the nose to the end of the tail.

Upon the whole, there can be little doubt that there are, in reality, three different species of Rhinoceros, viz. the common or single-horned Asiatic Rhinoceros, which seems to admit of occasional varieties, and may, perhaps, be sometimes furnished with a second or smaller horn; the African double-horned Rhinoceros with a rough or tuberculated skin, which was the species known to the ancient Romans; and, lastly, the Sumatran double-horned Rhinoceros, described and figured by Mr. Bell in the Philosophical Transactions.

The skulls of the above animals, compared together, exclusive of other characters, afford sufficient grounds for supposing a real difference of species. It is also necessary to observe here, that the Sumatran species, being furnished with *dentes primores*, or fore teeth, seems, of course, to contradict the character of the order *Bruta*, in which it is here placed. The common Rhinoceros also, when young, is provided with fore teeth, which are afterwards lost; as is probably the case in the Sumatran species.

In the twelfth edition of the Systema Naturæ the genus Rhinoceros was stationed among the *Belluæ*. In reality, however, where other prominent characters appear, and which are of themselves sufficient for the purpose of investigation, this scrupulous attention to the nature and situation of the teeth is the less important.

Mons. Geoffroy, in the *Magazin Encyclopédique*, is inclined to believe that there either exist, or, at least, have existed, no less than five differ-

ent species of Rhinoceros, viz. 1. The Rhinoceros Africanus cornu gemino of Camper, who has given a figure of the skull in the Petersburgh Transactions for the year 1777. 2. The species found fossil in Siberia, and which, Mons. Geoffroy contends, is different from the common two-horned Rhinoceros, though of that division in the genus. 3. That of which the skull is figured by Camper, and described by him in a letter to Dr. Pallas in the abovementioned volume of the Petersburgh Transactions: this is a single-horned species, and was confounded, even by Camper, with the common Rhinoceros. 4. The common Single-horned Asiatic Rhinoceros. 5. The Sumatran Rhinoceros, described by Mr. Bell in the Philosophical Transactions.

ELEPHANT.

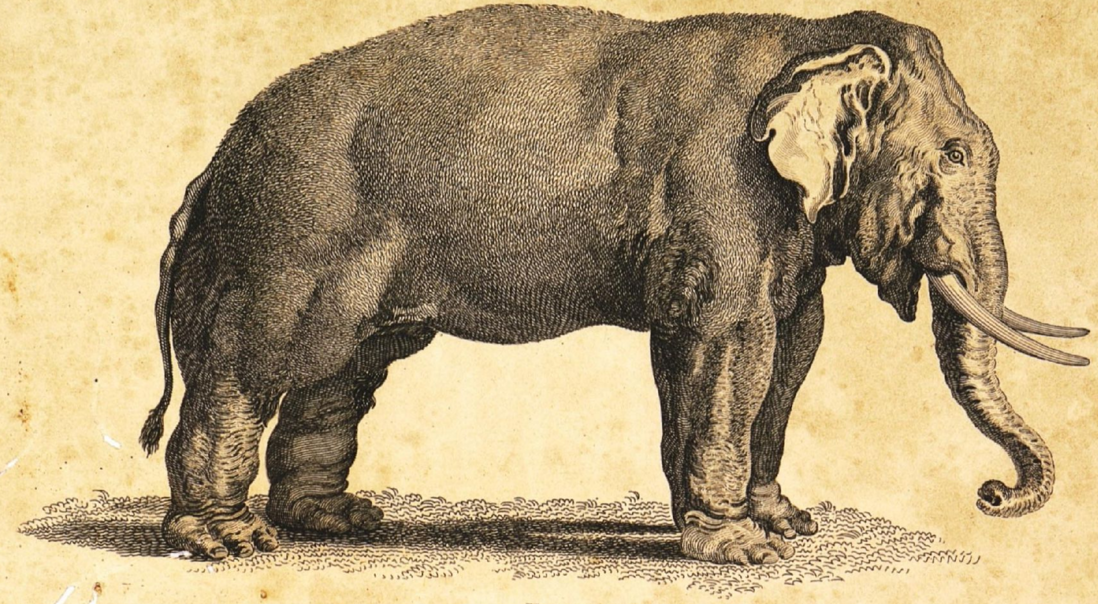
Generic Character.

Dentes Primores nulli utrinque.	*Cutting-teeth* none in either jaw.
Laniarii superiores elongati; inferiores nulli.	*Tusks* in the upper jaw.
Proboscis longissima prehensilis.	*Proboscis* very long, prehensile.
Corpus nudiusculum.	*Body* nearly naked.

GREAT ELEPHANT.

Elephas Maximus. *Lin. Syst. Nat. p.* 48.
Great Elephant. *Pennant Quadr.* 1. *p.* 165.
Elephantus. *Gesn. Quadr.* 337. *Aldr. Quadr. soliped. l.* 1. *p.* 418.
Johnst. Quadr. pl. 7, 8, 9. *Buff.* 11. *pl.* 1. *and suppl.* 3. *pl.* 59. *and* 6. *pl.* 2.
Edwards, pl. 221.

THE stupendous size, strength, and sagacity of the Elephant, have, in all ages, rendered it the admiration of mankind. Though possessed of power superior to every other quadruped, it is guiltless of unprovoked violence, and wanders



ELEPHANT.

1800 Feb. 1. Published by G. Kearsley Fleet Street

Heath sculp.

about the woods of Asia and Africa in a state of majestic mildness. Elephants are naturally gregarious. Large troops assemble together, and live in a kind of society. They feed only on vegetables, and are fond of the young shoots of trees. The Elephant is generally of a deep ash-coloured brown, or nearly blackish; but in some parts of India it is said to be found, though very rarely, of a white colour. In the young animals the tusks are not visible: in the more advanced state of growth they are extremely conspicuous; and in the full-grown animal they advance several feet from the mouths of their sockets: it is but rarely that the tusks are seen in the females; and, when they appear, they are but small, and their direction is rather downwards than upwards: this is also the case in some specimens of the male Elephant; so that there appears to be some variation in this respect in different individuals. Tusks have sometimes been seen upwards of ten feet long; particularly from the Mosambique and Cochinchina.

The teeth which are imported into Europe are generally from Africa, where they are frequently found in the woods. Instances have sometimes occurred, in which, on sawing a tooth, a brass bullet has been found completely imbeded in the central part of the tooth; the ivory having gradually grown over it, and enclosed it.

The Elephant is undoubtedly the largest of all terrestrial animals, arriving at the height of twelve feet; though the more general height

seems to be from nine to ten feet*. Elephants are commonly found in the midst of shady woods, being equally averse to extreme heat as to cold: they delight in cool spots, near rivers, and frequently bathe themselves in the water, and even roll in the mud. They are also capable of swimming with great ease. Their general food consists of the tender branches of various trees, as well as of grains and fruits. It is for this reason that their incursions are so much dreaded in plantations of various kinds, where they are said occasionally to commit the most violent depredations; at the same time, injuring the crops by trampling the ground with their vast feet. The trunk of the Elephant may justly be considered as one of the miracles of Nature; being, at once, the organ of respiration, and the instrument by which the animal supplies itself with food; conveying whatever it eats into the mouth by its assistance. By this instrument also it drinks; first sucking up the water by the trunk, and then pouring it into the mouth. This wonderful organ is, as it were, composed of a vast number of flexible rings, and consists of a double tube, with a somewhat flattened circular tip, furnished with a projecting point, or fleshy moveable hook, of extreme sensibility, and with which it can pick up the smallest object at

* How much the size of these animals has been exaggerated may be judged from the account given by Dr. Hill, who, in his Natural History, tells us, that the Elephant, when at full growth, measures from seventeen to twenty feet in height, from the ground to the highest part of the back. Vide Hill's Nat. Hist. of Animals, p. 565.

pleasure. The trunk, being flexible in all directions, performs the office of a hand and arm. On its under surface it is somewhat flattened, and is circularly formed on the upper. At the end of the trunk are situated the nostrils. The teats in the female Elephant are two in number, and are situated at a small distance behind the fore legs. The eyes are extremely small; the ears very large, somewhat irregularly waved on the edges, and pendulous. In each jaw are four large and flat grinding teeth, with the upper surfaces flat, and scored or striated with numerous transverse furrows. In the upper jaw are the two tusks before described. The form of the whole animal is extremely awkward: the head very large: the body very thick: the back greatly arched: the legs extremely thick, very short: and the feet slightly divided into, or rather edged with, five rounded hoofs: the tail is of a moderate length, and is terminated by a few scattered hairs, of great thickness, and of a black-colour: the general colour of the skin is also dusky or blackish, as before mentioned, and has a few thinly scattered hairs or bristles dispersed over it, and which are somewhat more numerous about the head.

The tales related of the sagacity of the Elephant are, in all probability, somewhat exaggerated, and must consequently be received with a degree of limitation: but there is no reason to doubt that they are possessed of a greater degree of intelligence than most other quadrupeds (the

dog excepted); and that, when in a state of domestication, they may be taught to perform many operations, requiring not only strength but skill in their execution. It appears, from the most authentic information, that they are highly attached to those who have them under their care: that they are grateful for attentions shewn them, and mindful of any injury received; which they generally find some means of retaliating. Some elegant anecdotes of this kind are related by Pliny; and the laborious Aldrovandus has collected many others. Mr. Pennant has admitted some into his History of Quadrupeds. The celebrated story of the taylor of Delli is a remarkable example of the Elephant's sagacity. In that city an Elephant, passing along the streets, put his trunk into a taylor's shop, where several people were at work: one of them pricked the end of the trunk with his needle: the Elephant passed on; but, in the first dirty puddle, filled his trunk with the water, and returning, squirted every drop among the people who had offended him, and spoiled the rich garments they were at work upon.

It is said that Elephants have been taught to lade vessels with goods, which they have stowed in proper order, and with much address.

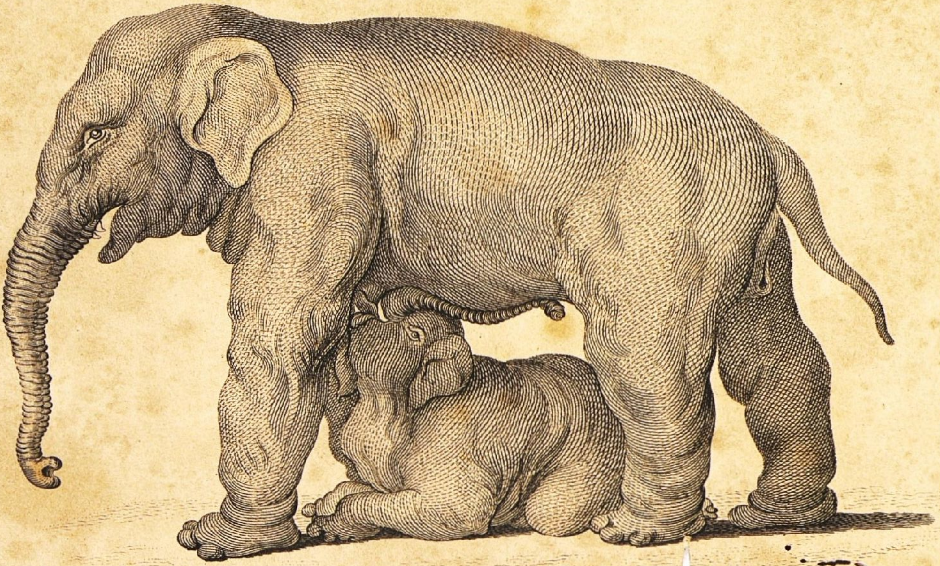
The Indian Elephants, but more especially those of the island of Ceylon, excel the African Elephants in size and strength. Those of India are said to carry with ease three or four thousand weight. In a state of nature they use the tusks for tearing up trees, and the trunk for breaking

the branches. It has been affirmed that they run as swiftly as a horse can gallop; but Mr. Pennant assures us, that what has been said on this subject is a mistake; and that a nimble Indian can easily outstrip them.

The contrivances for taking Elephants are various. The Ceylonese sometimes surround the woods with numerous bands, and drive with lighted torches, and all manner of noises, the Elephants which inhabit them, till they are at length entrapped into a particular spot surrounded with strong pallisades, so as to prevent all escape. At other times a kind of decoy or female Elephant is sent out in order to induce some of the males to pursue her, who are by this means secured. When a wild Elephant is taken, it still remains to reduce it to a quiet state; and to tame it, in order to be made useful: this is effected by throwing ropes round the legs and body, which are well secured; and two tame Elephants, properly instructed, are placed on each side. The captive animal finds himself gradually so fatigued by his ineffectual struggles, and so much soothed by the caresses occasionally given by the trunks of the tame Elephants, by the food from time to time presented to him, and the water with which he is refreshed by pouring it over him, that in the space of some days he becomes completely tame, and is placed with the rest of the domesticated troop. Sometimes, in order to subdue them the more effectually, they are deprived of sleep for a considerable space.

Great care is taken by the grandees of India in the management and decoration of their Elephants; which, after their daily feeding, bathing, oiling, and rubbing, are often painted about the ears and head with various colours, and their tusks are surrounded with rings of gold or silver: and when employed in processions, &c. they are clothed in the most sumptuous trappings.

By the ancient Indians they were much used in war; and we are told that Porus, the Indian monarch, opposed the passage of Alexander over the Hydaspes with eighty-five Elephants. Buffon also imagines that some of the Elephants which were taken by Alexander, and sent into Greece, were employed by Pyrrhus against the Romans. The Romans received their Elephants from Africa, and that in great numbers; since it appears that Pompey entertained the people with a show of eighteen in the space of five days; which were all destroyed in conflicts with armed men. Fifty lions were also exhibited in the same space. The crying and distress of the wounded Elephants is said to have excited much commiseration among the Roman people. It is highly remarkable, if true, that the young Elephants do not attach themselves to their dams in particular, but suck indiscriminately the females of the whole herd. Mr. Bruce, however, in his travels, gives a particular description of the more than common attachment of a young Elephant to its dam, which it endeavoured to defend, when wounded, and with much fierceness assaulted the invaders. The young Ele-



ELEPHANT SUCKLING ITS YOUNG.

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Heath sculp.

phants do not suck by the trunk, but by the mouth, as represented on the plate annexed.

It is a most curious fact, and may well excite our astonishment, that skeletons resembling those of Elephants are occasionally found in a fossil state, and in large quantities, at a great depth under the surface, in the most northern parts of Asia*. "All the Arctic circle (says Mr. Pennant) is a vast mossy flat, formed of a bed of mud or sand, seeming the effect of the sea, and which gives reason to think that that immense tract was in some very distant age won from it. With them are mixed an infinitely greater number of marine bodies than are found in the higher parts of that portion of Asia. I give the fact: let others, more favoured, explain the cause how these animals were transported from their torrid seats to the Arctic regions: I should have recourse to the only one we have authority for; and think that phenomenon sufficient: I mention this, because modern philosophers look out for a later cause: I rest convinced: therefore to avoid contradicting what can never be proved."

We must by no means here omit the fossil bones, viz. jaws, vertebræ, thigh-bones, and tusks, which are often found in some parts of North America: they are commonly found about five or six feet below the surface, on the banks of the river Ohio,

* A scrupulous anatomical investigation of these bones seems to prove, according to some late observations of the French naturalists, that they are in reality different from those of the Elephant, notwithstanding their general similarity; and are, therefore, to be numbered among the species of lost animals, known only from their fossil remains.

not far from the river Miame, seven hundred miles from the sea-coast. Of these the thigh-bones are much thicker in proportion than in the common Elephant: the grinders or side-teeth are very different from those of the Elephant, and, instead of having a flat top with numerous transverse scores, as in that animal, are pretty deeply lobed, like the teeth of carnivorous animals: the tusks bear a great resemblance to those of the common Elephant, but have an inclination to a spiral curve towards the smaller end*: in their common texture they perfectly resemble common ivory. It seems, therefore, extremely clear that this animal must have been a species differing from the common Elephant, but greatly resembling it. Whether it may yet exist in any of the unexplored parts of the globe, must be left to future investigations to determine. These bones are not peculiar to the northern regions of America, but have also been found in Siberia, in Peru, and in the Brasils; and it has been remarked that they are found at greater depths than the remains of the common Elephant, in strata, which are supposed to have been the ruins of the old world, after the event of the deluge.

The Elephant brings only one young at a time: very rarely two: the young are about three feet high when they are first born; and continue grow-

* The tusks of the common Elephant have sometimes not only an inclination to a spiral bend, but are actually twisted into two or three spiral curvatures, as in that described and engraved in Grew's Museum Regalis Societatis; and which is now preserved in the British Museum.

ing till they are sixteen or twenty years old: they are said to live a hundred or a hundred and twenty years.

In the Philosophical Transactions, for the year 1799, we find some curious particulars relative to the natural history of the Elephant, by Mr. Corse, whose residence in India afforded him opportunities of investigating the subject with exactness.

From these observations it appears that something must be subtracted from that elevated character with which this animal has been so frequently honoured; and that neither its docility nor its memory can be allowed a very high rank, when compared with those of some other animals; and that the scrupulous delicacy, which, as it was pretended, forbad all public demonstration of its passions, is a mere fable. A female Elephant has also been known to forget her young one, after having been separated from it for the short space of only two days, and to repel its advances. An Elephant, also, which had escaped from its confinement, has again suffered itself to be trepanned, and reconducted to its state of captivity; thus contradicting, in a remarkable manner, the Horatian sentiment:

——————— Quæ bellua ruptis,
Cum semel effugit, reddit se prava catenis? *

Both male and female Elephants, Mr. Corse informs us, are divided by the natives of Bengal

* What beast, deliver'd from the broken chain,
Perverse in folly, seeks his bonds again?

into two casts, viz. the Koomareah, and the Merghee. The first consists of the large or full-bodied kind; the second of the more slender, with longer legs and thinner trunk in proportion; it is also a taller animal, but not so strong as the former. A large trunk is always considered as a great beauty in an Elephant, so that the Koomareah is preferred not only on this account, but for his superior strength in carrying burthens, &c. Many indistinct varieties are again produced from the intermixture of these two breeds. The torrid zone seems to be the natural clime of the Elephant, and the most favourable for the production of the largest and hardiest race; and when this animal migrates beyond the tropics, the species degenerates. On the coasts of Malabar, Elephants are taken as far north as the territories of Coorgah Rajah; but these, according to Mr. Corse, are much inferior to the Ceylonese Elephant.

Mr. Corse's observations on the teeth of the Elephant, and the gradual progress of dentition, are extremely curious. The principal particulars are the following:

"The tusks in some female Elephants are so small as not to appear beyond the lip, whilst in others they are almost as large and long as in one variety of the male, called Mooknah. The grinders are so much alike in both sexes, that one description may serve for both. The largest tusks, and from which the best ivory is supplied, are taken from that kind of male Elephant, called Dauntelah, from this circumstance, in opposition

to the Mooknah, whose tusks are not larger than those of some females. An Elephant is said to be perfect when his ears are large and rounded, not ragged or indented at the margin: his eyes of a dark hazel-colour, free from specks: the roof of his mouth and his tongue without dark or blackish spots of any considerable size: his trunk large: his tail long, with a tuft of hair reaching nearly to the ground. There must be five nails on each of his fore feet, and four on each of the hind ones: his head well set on, and carried rather high: the arch or curve of his back rising gradually from the shoulder to the middle, and thence descending to the insertion of the tail; and all his joints firm and strong. In one variety of the Elephant the tusks point downwards, projecting only a little way beyond the trunk. The tusks in Elephants are fixed very deep in the upper jaw; and the root or upper part, which is hollow, and filled with a core, goes as high as the insertion of the trunk, round the margin of the nasal opening to the throat; which opening is just below the protuberance of the forehead. Through this opening the Elephant breathes, and by its means he sucks up water into his trunk: between it and the roots of the tusks there is only a thin bony plate. The first or milk-tusks of an Elephant never grow to any considerable size, but are shed between the first and second year, when not two inches in length. The time at which the tusks cut the gum varies considerably: sometimes a young Elephant has his tusks at five months old, and sometimes not till seven. Even in a fœtus,

which has arrived at its full time, these deciduous tusks are formed. A young Elephant shed one of his milk-tusks on the 6th of November, 1790, when about thirteen months old; and the other on the 7th of December, when above four months old. Two months afterwards the permanent ones cut the gums, and on the 19th of April, 1791, they were an inch long. Another young Elephant did not shed his milk-tusks till he was sixteen months old, which proves that the time of this process varies considerably. The permanent tusks of the female are very small, compared with those of the male; and do not take their rise so deep in the jaw. The largest Elephant tusks Mr. Corse ever saw in Bengal did not exceed the weight of seventy-two pounds avoirdupois: at Tiperah they seldom exceed fifty pounds each. Both these weights are very inferior to that of the tusks brought from other parts to the India House, where some have weighed 150 pounds each. These, Mr. Corse suspects, were from Pegu. The African Elephant is said to be smaller than the Asiatic: yet the ivory-dealers in London affirm that the largest tusks come from Africa, and are of a better texture, and less liable to turn yellow, than the Indian ones. The increase of the tusks arises from circular layers of ivory, applied internally, from the core on which they are formed; similar to what happens in the horns of some animals.

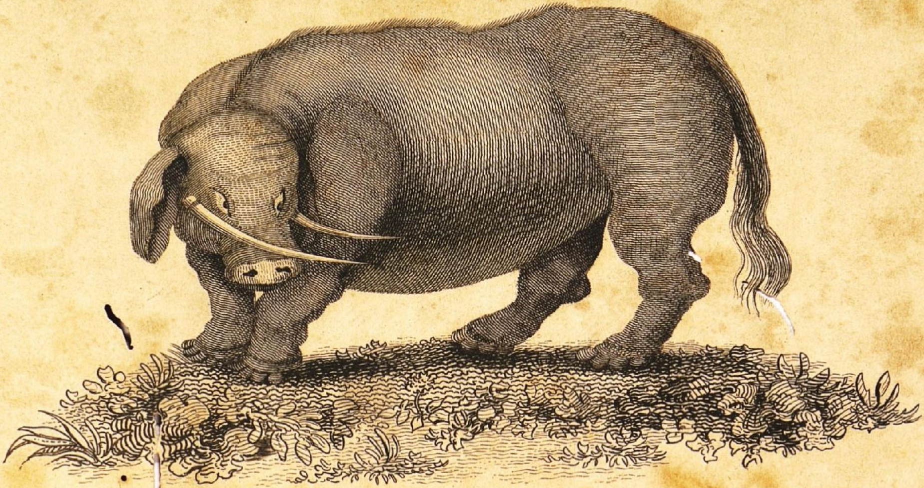
The grinders of Elephants may be considered as composed of several distinct laminæ or teeth, each covered with its proper enamel; and these

teeth are merely joined to each other by an intermediate softer substance, acting as a cement. This structure, even at first glance, must appear very curious, being composed of a number of perpendicular laminæ, which may be considered as so many teeth; each covered with a strong enamel, and joined to one another by the common osseous matter: this, being much softer than the enamel, wears away faster by the mastication of the food; and in a few months after these teeth cut the gum, the enamel rises considerably higher, so that the surface of each grinder soon acquires a ribbed appearance, as if originally formed with ridges. The number of these teeth, or portions, of which an Elephant's grinder is composed, varies from four to twenty-three, according as the animal advances in age; so that a grinder or case of teeth in a full-grown Elephant is more than sufficient to fill one side of the mouth. The shape of the grinders of the lower jaw differs from those of the upper, which are very convex on the back part, whereas the lower has a bent or curved direction, adapting itself to the shape of the jaw; and is concave on the surface. The grinders, like the tusks, are already formed, even in the very young animal. The first set of grinders, or milk-teeth, begin to cut the gum eight or ten days after birth: they are not shed, or cast, as the milk-tusks are, but are gradually worn away during the time the second set are coming forward. Mr. Corse could not ascertain the exact time at which the second set of grinders make their appearance,

but when the Elephant is two years old, the second set are then completely in use. At about this period the third set begins to cut the gum, and from the end of the second to the beginning of the sixth year, the third set comes gradually forward as the jaw lengthens, not only to fill up this additional space, but also to supply the place of the second set, which are, during the same period, gradually worn away, and their fangs or roots obsorbed. From the beginning of the sixth to the end of the ninth year, the fourth set of grinders comes forward, to supply the gradual waste of the third set. After this period other sets are produced, but in what time, and in what proportion, is not yet ascertained; but it is reasonable to conclude, that every succeeding grinder takes a year longer than its predecessor to be completed; and consequently, that the fifth, sixth, seventh, and eighth set of grinders will take from five to eight years (and probably much longer) each set, before the posterior lamina has cut the gum.

SUKOTYRO.

THAT we may not seem to neglect so remarkable an animal, though hitherto so very imperfectly known, we shall here introduce the Sukotyro. This, according to Niewhoff, its only describer, and who has figured it in his travels to the East Indies, is a quadruped of a very singular shape. Its size is that of a large ox: the snout like that



SUKOTYRO.

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White sculp.

of a hog: the ears long and rough; and the tail thick and bushy. The eyes are placed upright in the head, quite differently from those of other quadrupeds. On each side the head, next to the eyes, stand the horns, or rather teeth, not quite so thick as those of an Elephant. This animal feeds upon herbage, and is but seldom taken. It is a native of Java, and is called by the Chinese *Sukotyro*. This is all the description given by Niewhoff. The figure is repeated in Churchill's Collection of Voyages and Travels, vol. 2. p. 360. Niewhoff was a Dutch traveller, who visited the East Indies about the middle of the last century, viz. about the year 1563, and continued his peregrinations for several years. It must be confessed that some of the figures introduced into his works are not remarkable for their accuracy.

PLATYPUS.

Generic Character.

Os anatinum.	*Mouth* shaped like the bill of a duck.
Pedes palmati.	*Feet* webbed.

OF this most extraordinary genus the first description appeared in the Naturalist's Miscellany; but as the individual there described was the only one which had been seen, it was impossible not to entertain some distant doubts as to the genuine nature of the animal, and to surmise, that, though in appearance perfectly natural, there might still have been practised some arts of deception in its structure. I, therefore, hesitated as to admitting it into the present History of Quadrupeds. Two more specimens, however, having been very lately sent over from New Holland, by Governor Hunter, to Sir Joseph Banks, the suspicions before mentioned are now completely dissipated. I shall, therefore, here repeat my first description in the work above mentioned, and have only to observe, that the genus should be placed, as there proposed, next to that of *Myrmecophaga*, in the present order of *Bruta*.

DUCK-BILLED PLATYPUS.

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DUCK-BILLED PLATYPUS.

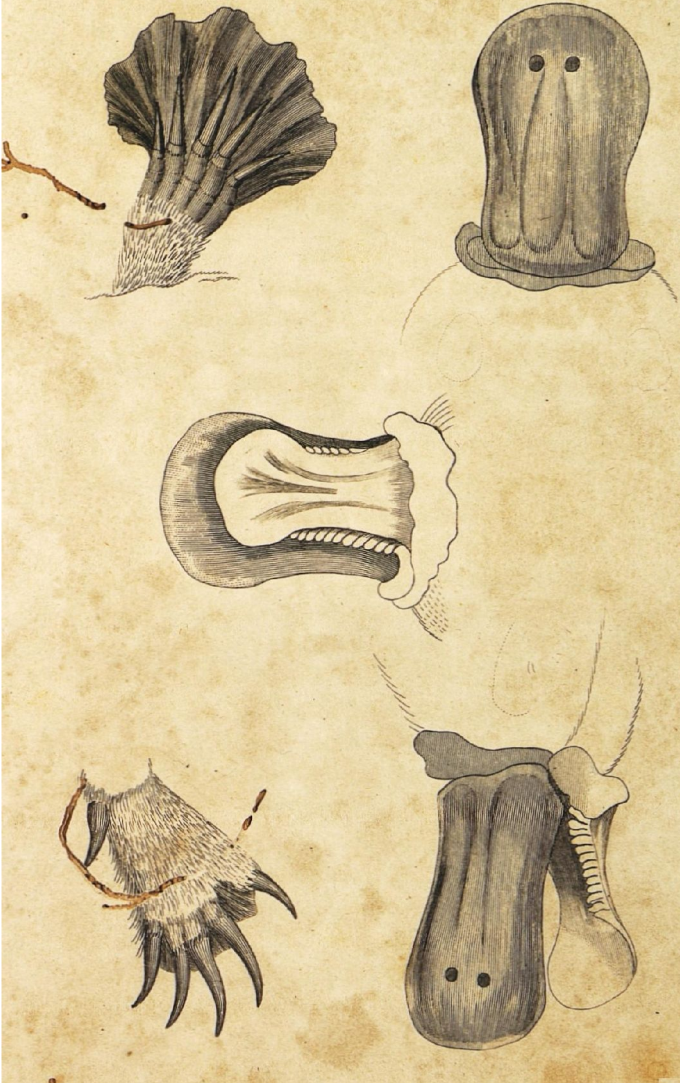
Platypus Anatinus. *Vivarium Naturæ, tab.* 385.
The Duck-billed Platypus. *Naturalist's Miscellany, pl.* 385.

The animal exhibited on the present plate constitutes a new and singular genus, which, in the Linnæan arrangement of quadrupeds, should be placed in the order *Bruta*, and should stand next to the genus Myrmecophaga.

Of all the Mammalia yet known it seems the most extraordinary in its conformation; exhibiting the perfect resemblance of the beak of a Duck engrafted on the head of a quadruped. So accurate is the similitude, that, at first view, it naturally excites the idea of some deceptive preparation by artificial means; the very epidermis, proportion, serratures, manner of opening, and other particulars of the beak of a shoveler, or other broad-billed species of duck, presenting themselves to the view: nor is it without the most minute and rigid examination that we can persuade ourselves of its being the real beak or snout of a quadruped.

The body is depressed, and has some resemblance to that of an Otter in miniature: it is covered with a very thick, soft, and beaver-like fur, and is of a moderately dark brown above, and of a subferruginous white beneath. The head is flattish, and rather small than large: the mouth or snout, as before observed, so exactly resembles that of some broad-billed species of duck that it

might be mistaken for such: round the base is a flat, circular membrane, somewhat deeper or wider below than above, viz. below near the fifth of an inch, and above about an eighth. The tail is flat, furry like the body, rather short, and obtuse, with an almost bifid termination: it is broader at the base, and gradually lessens to the tip, and is about three inches in length: its colour is similar to that of the body. The length of the whole animal from the tip of the beak to that of the tail is thirteen inches: of the beak an inch and half. The legs are very short, terminating in a broad web, which on the fore feet extends to a considerable distance beyond the claws; but on the hind feet reaches no farther than the roots of the claws. On the fore feet are five claws, strait, strong, and sharp-pointed: the two exterior ones somewhat shorter than the three middle ones. On the hind feet are six claws, longer and more inclining to a curved form than those on the fore feet: the exterior toe and claw are considerably shorter than the four middle ones: the interior or sixth is seated much higher up than the rest, and resembles a strong, sharp spur. All the legs are hairy above: the fore feet are naked both above and below; but the hind feet are hairy above, and naked below. The internal edge of the under mandible (which is narrower than the upper) are serrated or channeled with numerous striæ, as in a duck's bill. The nostrils are small and round, and are situated about a quarter of an inch from the tip of the bill, and are about the eighth of an



Beak & Feet of the PLATYPUS of their Natural size.

inch distant from each other. There is no appearance of teeth: the palate is removed, but seems to have resembled that of a duck: the tongue also is wanting in the specimen. The ears or auditory foramina are placed about an inch beyond the eyes: they appear like a pair of oval holes of the eighth of an inch in diameter; there being no external ear. On the upper part of the head, on each side, a little beyond the beak, are situated two smallish oval white spots; in the lower part of each of which are imbedded the eyes, or at least the parts allotted to the animal for some kind of vision; for from the thickness of the fur and the smallness of the organs they seem to have been but obscurely calculated for distinct vision, and are probably like those of Moles, and some other animals of that tribe; or perhaps even subcutaneous; the whole apparent diameter of the cavity in which they were placed not exceeding the tenth of an inch.

When we consider the general form of this animal, and particularly its bill and webbed feet, we shall readily perceive that it must be a resident in watery situations; that it has the habits of digging or burrowing in the banks of rivers, or under ground; and that its food consists of aquatic plants and animals. This is all that can at present be reasonably guessed at: future observations, made in its native regions, will, it is hoped, afford us more ample information, and will make us fully acquainted with the natural history of an animal which differs so widely from all other quadrupeds,

and which verifies in a most striking manner the observation of Buffon, viz. that whatever was possible for Nature to produce, has actually been produced.

On a subject so extraordinary as the present, a degree of scepticism is not only pardonable, but laudable; and I ought perhaps to acknowledge that I almost doubt the testimony of my own eyes with respect to the structure of this animal's beak; yet must confess that I can perceive no appearance of any deceptive preparation; and the edges of the rictus, the insertion, &c. when tried by the test of maceration in water, so as to render every part completely moveable, seem perfectly natural; nor can the most accurate examination of expert anatomists discover any deception in this particular.

The Platypus is a native of Australasia or New Holland.

TRICHECHUS. WALRUS.

Generic Character.

Dentes Primores (adulto) nulli utrinque.	*Fore-teeth* (in the full-grown animal) none either above or below.
Laniarii superiores solitarii.	*Tusks* solitary, in the upper jaw.
Molares ex osse rugoso utrinque.	*Grinders*, with wrinkled surfaces.
Labia geminata.	*Lips* doubled.
Pedes posteriores compedes coadunati in pinnam.	*Hind-feet*, at the extremity of the body, uniting into a fin.

THE genus Trichechus is entirely marine, and contains but very few species: of these the principal is the Trichechus Rosmarus, or, as it is sometimes called, the Sea Horse, or Walrus.

ARCTIC WALRUS.

Trichechus Rosmarus. *T. dentibus laniariis superioribus exsertis remotis. Lin. Syst. Nat. Gmel. p.* 59.
Trichechus with distant, exserted tusks.
Rosmarus. *Jonst. pisc. t.* 44.
Le Morse. *Buff.* 13. *p.* 358. *pl.* 54.
Arctic Walrus. *Pennant Quadr.* 2. *p.* 266. *Cook's last voy. vol.* 2. *p.* 456. *pl.* 52. *Naturalist's Miscellany, pl.* 76.

This animal inhabits the northern seas, and is principally found within the Arctic circle. It grows to a very large size, having been sometimes seen of the length of eighteen feet, and of such a thickness as to measure twelve feet round the middle of the body. The Walrus is of an inelegant form; having a small head, short neck, thick body, and short legs: the lips are very thick, and the upper lip is indented or cleft into two large rounded lobes: over the whole surface of this part are scattered numerous semitransparent bristles, of a yellowish tinge, and of such a thickness as almost to equal a straw in diameter: they are about three inches long, and are slightly pointed at their extremities: the eyes are small: instead of external ears there are only two small, round orifices: the skin on the whole animal is thick, and more or less wrinkled, and is scattered over with short brownish hair: on each foot are five toes, all connected by webs, and on each toe is a small nail: the hind feet are considerably broader than the fore feet: the tail is extremely short. In the upper jaw are two large and long

ARCTIC WALRUS.

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tusks, bending downwards: there are no cutting-teeth, but in each jaw, both above and below, are four roundish grinders with flat tops: the tusks are sometimes upwards of two feet in length, but are more generally of about one foot long; and it sometimes happens that the two tusks are not perfectly equal in length. The chief resorts of the Walrus are the seas about the northern parts of America. They are found in the gulph of St. Laurence, according to Mr. Pennant, between latitude 47 and 48, which seems to be the most southern latitude in any part of the globe. They are also found in Davis's Straits, and within Hudson's Bay, it lat. 62. They inhabit the coast of Greenland; and are found in great numbers about Spitsbergen, and on the floating ice in those parts. They occur likewise on the coasts of Nova Zembla, and on the head lands stretching towards the North Pole.

They are gregarious animals, and are sometimes seen in vast multitudes on the masses of floating ice so frequent in the northern seas. They are said to produce their young early in the spring; and rarely bring more than one at a birth: their food consists of sea plants, shell-fish, &c.

The Walrus is a harmless animal, unless provoked or attacked, in which case it becomes furious, and is extremely vindictive. When surprised upon the ice, the female is said first to provide for the safety of the young, by flinging it into the sea, and immediately precipitating itself

after it, carrying it to a secure distance, and then returning, with great rage, to revenge the injury. They will sometimes attempt to fasten their teeth on the boats, with an intent to sink them; or rise in numbers under them to overset them; at the same time shewing all the marks of rage, by roaring in a dreadful manner, and gnashing their teeth with great violence; if once thoroughly irritated, the whole herd will follow the boats till they lose sight of them. They are strongly attached to each other; and it is said that a wounded Walrus has been known to sink to the bottom, rise suddenly up again, and bring with it multitudes of others, which have united in an attack upon the boat from whence the insult came.

The Walrus has been tolerably well figured by Jonston, and this figure has been copied by succeeding writers. An excellent representation is also given in pl. 52. of the last voyage of our illustrious navigator, Captain Cook. It is easy, however, to perceive a remarkable difference between the tusks of this last, and those of the former kind figured in Jonston, and it clearly appears, that though this difference is not such as to justify our considering them as two distinct species, yet it obliges us to remark them as varieties; and it should seem, that, in the regions then visited by Captain Cook, viz. the icy coasts of the American continent, in lat. 70, the Walrus is found with tusks much longer, thinner, and far more sharp-pointed, in proportion, than the common Walrus; and they have a slight inclination

ARCTIC WALRUS. from Jonston.

Mutlow. sculp.

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to a subspiral twist: there is also a difference in the position of the tusks in the two animals; those of the variety figured in Captain Cook's voyage curving inwards in such a manner as nearly to meet at the points, while those of the former divaricate. These differences appear very striking on collating different heads of these animals. Something may, however, be allowed to the different stages of growth as well as to the difference of sex. In order that these differences may be the more clearly understood, we have figured both varieties on the annexed plates; and, as a farther illustration of the subject, we shall give, in the celebrated navigator's own words, the description of a herd of Walruses on a floating mass of ice in the above-mentioned latitude.

"They lie, in herds of many hundreds, upon the ice; huddling one over the other like swine; and roar or bray very loud; so that in the night, or in foggy weather, they gave us notice of the vicinity of the ice, before we could see it. We never found the whole herd asleep, some being always upon the watch. These, on the approach of the boat, would wake those next to them; and the alarm being thus gradually communicated, the whole herd would be awake presently. But they were seldom in a hurry to get away, till after they had been once fired at. Then they would tumble one over the other into the sea in the utmost confusion. And if we did not, at the first discharge, kill those we fired at, we generally lost them, though mortally wounded. They did

not appear to us to be that dangerous animal some authors have described; not even when attacked. They are rather more so to appearance than in reality. Vast numbers of them would follow, and come close up to, the boats. But the flash of a musquet in the pan, or even the bare pointing of one at them, would send them down in an instant. The female will defend the young one to the very last, and at the expence of her own life, whether in the water or upon the ice. Nor will the young one quit the dam, though she be dead; so that if you kill one, you are sure of the other. The dam, when in the water, holds the young one between her fore fins.

"Why they should be called sea-horses is hard to say; unless the word be a corruption of the Russian name Morse; for they have not the least resemblance of a horse. This is, without doubt, the same animal that is found in the Gulph of St. Laurence, and there called Sea-Cow. It is certainly more like a cow than a horse, but this likeness consists in nothing but the snout. In short, it is an animal like a seal, but incomparably larger."

The teeth of the Walrus are used by way of ivory; but on this subject authors seem to vary considerably; some representing them as superior to common ivory, and others greatly inferior, and more subject to turn yellow. The animals are now killed chiefly for the sake of the oil; and it is said that a very strong and elastic leather may be prepared from the skin.

INDIAN WALRUS.

Trichechus Dugong. *T. dentibus laniariis superioribus exsertis approximatis. Lin. Syst. Nat. Gmel. p.* 60.

Dugon. *Buff.* 13. *p.* 374. *pl.* 56.

Indian Walrus. *Pennant Quadr.* 2. *p.* 369.

THIS species is a native of the seas about the Cape of Good Hope and the Philippine islands. It does not, however, seem to be very clearly known to naturalists. The count de Buffon informs us, that he had seen the two heads of this species, which had in the upper jaw two tusks, not extending directly out of the mouth, as in the common Walrus, but much shorter, being not above half a foot long; more slender, and rather resembling large cutting-teeth than tusks; being situated very near each other in the fore part of the jaw. The grinders also differ from those of the Walrus, being broader in proportion; of these there are four on each side in the upper jaw, and three in the lower. The head is also said to be of a sharper or narrower form. This species, in the Philippine islands, is said to be called by the name of *Dugung*.

WHALE-TAILED TRICHECHUS.

Trichechus Borealis. *T. nudus, cauda horizontali loco pedum posteriorum.*
Hairless Trichechus, with a horizontal tail in place of hind feet.
Trichechus borealis. *Var. B. T. Manati. Lin. Syst. Nat. Gmel. p.* 61.
Whale-tailed Manati. *Pennant Quadr.* 2. *p.* 292.

THIS animal seems to approach so nearly to the cetaceous or whale tribe, as scarce to deserve, according to Mr. Pennant, the name even of a biped; what are called the feet being little more than pectoral fins; which serve only for swimming, and are never used to assist the animal either in walking or landing; for it never goes ashore, nor ever attempts to climb the rocks like the Walrus and the Seal. It brings forth in the water, and, like the Whale, suckles its young in that element. Like the Whale it is also destitute of voice, and has also a horizontal tail, which is broad, and of the form of a crescent, without even the rudiments of hind feet.

So complete is the account given by Mr. Pennant of this animal, that we shall here deliver the most material parts of that author's description, rather than attempt a new one.

It inhabits the seas about *Berings* and the other *Aleutian* islands, which intervene between *Kamtschatka* and *America*, but never appears off Kamtschatka, unless blown ashore by a tempest. It is probably the same species which is found

above *Mindanao**, but is certainly that which inhabits near *Rodiguez*, vulgarly called *Diego Reys*, an island to the east of *Mauritius*, or the isle of *France*, near which it is likewise found. It is also probable that it extends to New Holland. They live perpetually in the water, and frequent the edges of the shores; and, in calm weather, swim in great droves near the mouths of rivers: in the time of flood they come so near the land that a person may stroke them with his hand: if hurt, they swim out to the sea, but presently return again. They live in families, one near another; each consists of a male, a female, a half-grown young one, and a very small one. The females oblige the young to swim before them, while the other old ones surround, and, as it were, guard them on all sides. The affection between the male and female is very great; for if she is attacked, he will defend her to the utmost, and if she is killed, will follow her corpse to the very shore, and swim for some days near the place it has been landed at.

They are vastly voracious, and feed not only on the fuci that grow in the sea, but such as are flung on the edges of the shore. When they are filled, they fall asleep on their backs. During their meals they are so intent on their food, that any one may go among them, and choose which he likes best. Their back and sides are generally above water; and numbers of gulls, from

* Dampier, voy. I. p. 321.

time to time, perch on their backs, in order to pick the insects which they find upon them.

They continue in the Kamtschatkan and American seas the whole year; but in winter they are very lean, so that one may count their ribs. They are taken by harpoons fastened to a strong cord; and after they are struck, it requires the force of thirty men to draw then on shore. Sometimes, when they are transfixed, they will lay hold of the rocks with their paws, and stick so fast as to leave the skin behind before they can be forced off. When a Manati is struck, its companions swim to its assistance; some will attempt to overturn the boat, by getting under it; others will press down the rope, in order to break it; and others will strike at the harpoon with their tails, with a view of getting it out, which they often succeed in. They have no voice, but make a noise, by hard breathing, like the snorting of a horse.

They are of an enormous size: some are twenty-eight feet long, and eight thousand pounds weight: but, if the *Mindanao* species be the same with this, it decreases in size as it advances southward, for the largest which Dampier saw there weighed only six hundred pounds. The head, in proportion to the bulk of the animal, is small, oblong, and almost square: the nostrils are filled with short bristles: the gape or rictus is small: the lips are double: near the junction of the two jaws the mouth is full of white tubular bristles, which serve the same purpose as the laminæ in Whales—to prevent the food from running out with the

water: the lips are also full of bristles, which serve instead of teeth to cut the strong roots of sea plants, which, floating ashore, are a sign of the vicinity of these animals. In the mouth are no teeth, only two flat, white bones, one in each jaw, one above, another below, with undulated surfaces, which serve instead of grinders.

The eyes are extremely small; not larger than those of a sheep: instead of ears are only two minute orifices, which will scarce permit a quill to enter: the tongue is pointed and small: the neck thick; and its junction with the head scarce distinguishable; and the last always hangs down.

The circumference of the body near the shoulders is twelve feet; about the belly twenty; near the tail only four feet eight inches: the head thirty-one inches: the neck near seven feet; and from these measurements may be collected the deformity of the animal. Near the shoulders are two feet, or rather fins, which are only two feet two inches long, and have neither fingers nor nails: beneath they are concave, and covered with hard bristles; the tail is thick, strong, and horizontal, ending in a stiff black fin, and like the substance of whalebone, being much split on the fore part, and slightly forked; but both ends are of equal length like the whale.

The skin is very thick, hard, and black; and full of inequalities like the bark of oak; and so hard as scarcely to be cut with an ax, and has no hair upon it: beneath the skin is a thick blubber, which is said to taste like oil of almonds. The

flesh is coarser than beef, and will not soon putrify: the young ones taste like veal: the skin is used for shoes, and for covering the sides of boats. The Russians call this animal *Morskaia korowa* or Sea Cow, and *Kapustnik* or Eater of Herbs.

ROUND-TAILED TRICHECHUS.

Trichechus Australis. *T. pilosus, cauda horizontali loco pedum posteriorum.*

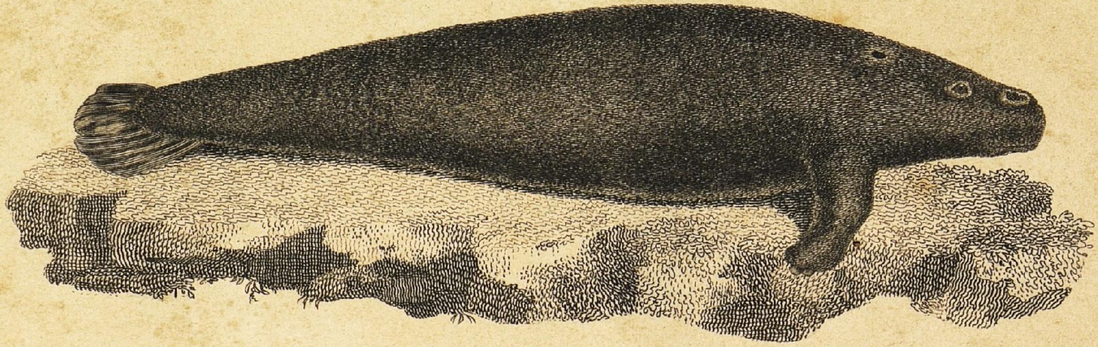
Hairy Trichechus, with a horizontal tail in place of hind feet.

Trichechus Australis. *Var. and T. Manati. Lin. Syst. Nat. Gmel. p.* 60.

Round-tailed Manati. *Pennant Quadr.* 2. *p.* 296.

This species grows to the length of fourteen or fifteen feet, and is found in the rivers of Africa; particularly in the river Senegal. A complete specimen occurs in the Leverian Museum, and is about six feet and a half long, and about three feet eight inches in circumference in the thickest part of the body; and in the thinnest part or near the tail about two feet two inches.

In this species the lips are thick; the eyes as small as peas; and there are two very small orifices in the place of ears: in each jaw on each side are nine grinding teeth; in all thirty-six: the neck is short and thicker than the head: the greatest thickness of the body is about the shoulders, from whence it gradually tapers to the tail, which is horizontal, broad, thickest in the middle, growing thinner to the edges, and quite round. The



ROUND-TAILED TRICHECHUS.

Heath sculp.

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feet are placed at the shoulders; and beneath the skin are bones for five complete toes, and externally are three or four nails, flat and rounded: near the base of each leg, in the female, is a small teat. The flesh of this animal is said to resemble veal: it is, however, chiefly killed by the negroes for the sake of the blubber or fat.

GUIANA TRICHECHUS.

Trichechus Manatus. *T. subpilosus, dentibus laniariis nullis, cauda horizontali loco pedum posteriorum.*

Slightly hairy Trichechus, without tusks, and with a horizontal tail in place of hind feet.

Traichechus Manatus. *Lin. Syst. Nat. Gmel. p.* 60.

Guiana Manati. *Pennant Quadr.* 2. *p.* 297.

This is a native of Guiana, inhabiting the larger rivers as well as the sea, and grows to the length of sixteen or eighteen feet: the skin is of a dark brown, with scattered hairs on it. The head hangs downward: the feet have five toes: the body continues of nearly the same thickness almost to the tail, where it suddenly narrows: the tail is flat, and of the shape of a spatula; thickest in the middle, and thinner towards the edges.

VAR.

Thichechus Clusii.
Clusius's Manati.

In Clusius's Exotics is given a figure and description of a Manati from the West Indies; but it is not easy to ascertain the species. Clusius says it had short nails and broad feet; and that the tail was broad and shapeless. The Count de Buffon, in his supplement, vol. 6. makes it a distinct species. Mr. Pennant suspects it to be the same with the Guiana species above described.

Trichechus Amazonius.
Oronoko Manati. Pennant.

This is an inhabitant of the South-American rivers, and is said to grow to an enormous size. We are told by Father Gumilla, that one was taken in a lake near the Oronoko, which was so large that twenty-seven men could not draw it out of the water. On cutting it open, two young ones were found in it, which weighed twenty-five pounds apiece. This species is said most to abound in the river Amazons and the neighbouring lakes. Sometimes, however, they are found in the sea, and near the mouths of rivers. As an article of food it is said to be superior to any other animal of this genus, particularly the young.

It is taken by means of harpoons. At the time when the waters of the Oronoque (which annually

overflow their banks) begin to return into the bed of the river, the Indians make dams across the mouths of the shallow lakes formed by the floods, and thus take great numbers of Manatis, as well as tortoises, fish, &c.

We must not here omit the curious history of a tame Manati, which, at the time of the arrival of the Spaniards, was kept by a prince of Hispaniola, in a lake adjoining to his residence. It was, on account of its gentle nature, called, in the language of the country, by the name of *Matum*. It would appear as soon as it was called by any of its familiars; for it hated the Spaniards, on account of an injury it had received from one of those adventurers. The fable of Arion was here realized. It would offer itself to the Indian favourites, and carry over the lake ten at a time, singing and playing on its back: one youth it was particularly enamoured with, which reminds me (says Mr. Pennant) of the classical parallel in the Dolphin of Hippo, so beautifully related by the younger Pliny. The fates of the two animals were very different: Matum escaped to its native waters by means of a violent flood: the Hipponensian fish fell a sacrifice to the poverty of the retired colonists *.

Trichechus? Hydropithecus.
Sea-Ape Manati. Pennant.

This species is only known from the description of Steller, who, near the coast of America, saw a

* Vide Pet. Martyr's Decades of the Indies, Dec. 3. book 8.

singular animal which he chose to name a Sea-Ape, and which Mr. Pennant supposes to belong to this genus. It was about five feet long, with a head like a dog's: the ears sharp and erect: the eyes large: on both lips a kind of beard: the form of the body was thick and round; thickest near the head, tapering to the tail, which was bifurcated, the upper lobe longest: the body covered with thick hair, grey on the back and red on the belly. Steller could not discover any feet or paws. It was full of frolick, and sported in the manner of a monkey; swimming sometimes on one side of the ship, and sometimes on the other; and looking at it with much seeming surprise. It would come so near the ship that it might be touched with a pole; but if any one stirred, it would immediately retire. It often raised one third of its body above the water, and stood upright for a considerable time; then suddenly darted under the ship, and appeared in the same attitude on the other side, and would repeat this for thirty times together. It would frequently bring up a sea-plant not unlike a bottle gourd, which it would toss about and catch again in its mouth, playing numberless fantastic tricks with it.

END OF PART I.

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